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FINAL REPORT ON HEAD START EVALUATION AND RESEARCH--1966-67 TO THE INSTITUTE FOR EDUCATIONAL DEVELOPMENT. SECTION VI, THE MEASUREMENT OF BILINGUALISM AND BICULTURAL SOCIALIZATION OF THE CHILD IN THE SCHOOL SETTING--THE DEVELOPMENT OF INSTRUMENTS.

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A STUDY TO DEVELOP INSTRUMENTS TO MEASURE CHILD BILINGUALISM AND BICULTURAL SOCIALIZATION WAS CONDUCTED IN DEL RIO, TEXAS, A MEXICAN-AMERICAN COMMUNITY IN WHICH SCHOOL IS TAUGHT IN BOTH SPANISH AND ENGLISH. THREE INSTRUMENTS WERE DEVELOPED--(1) A SERIES OF 6 TESTS FOR MEASURING LINGUISTIC COMPETENCE IN ENGLISH, (2) A SIMILAR SERIES OF 6 TESTS FOR SPANISH, AND (3) A SERIES OF 3 INSTRUMENTS FOR MEASURING SOCIALIZATION. TEST BATTERIES FOCUSED ON THE ORAL-AURAL USE OF LANGUAGE IN REALISTIC SCHOOL SITUATIONS. A RANDOM SAMPLE OF 97 FIRST GRADERS WAS GROUPED INTO 4 EXPERIMENTAL SECTIONS TAUGHT BILINGUALLY BY MEXICAN-AMERICAN TEACHERS AND INTO 4 CONTROL SECTIONS TAUGHT IN ENGLISH BY ENGLISH TEACHERS. THE CONTROL GROUP CHILDREN WERE GIVEN THE ENGLISH SERIES AND INVENTORY OF SOCIALIZATION WHILE THE EXPERIMENTAL CHILDREN WERE GIVEN BOTH THE ENGLISH AND SPANISH SERIES AND THE INVENTORY. ANALYSIS OF TEST RESULTS SHOWED THAT THE EXPERIMENTAL SUBJECTS WERE AS COMPETENT IN ENGLISH AS THOSE LEARNING ONLY IN ENGLISH AND ALSO BETTER ADJUSTED SOCIALLY. TEST INSTRUMENT VALIDITY AND RELIABILITY WAS DETERMINED AND AN ITEM ANALYSIS CARRIED OUT. APPENDIXES WHICH INCLUDE FACSIMILES OF TEST INSTRUMENTS AND ANALYSES OF EXPERIMENTAL DATA COMPRISE MORE THAN HALF OF THE REPORT. (MS)

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HEAD START EVALUATION AND RESEARCH: 1966-67

(Contract No. 66-1)

TO

THE INSTITUTE FOR EDUCATIONAL DEVELOPMENT

By

The Staff and Study Directors
CHILD DEVELOPMENT EVALUATION AND RESEARCH CENTER
John Pierce-Jones, Ph.D., Director
The University of Texas at Austin

August 31, 1967

Section VI: THE MEASUREMENT OF BILINGUALISM AND BICULTURAL SOCIALIZATION OF THE CHILD IN THE SCHOOL SETTING: THE DEVELOPMENT OF INSTRUMENTS

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Edward J. Cervenka

INTRODUCTION: A Perspective on Bilingualism as a Social and Educational Movement and the Role of the Scientific Investigator

CHAPTER I

No present-day investigator of bilingualism and bilingual schooling can help sensing that his work involves him in social and moral issues which are pressing for settlement in contemporary society. It behooves the investigator, therefore, to try to form a conscious perspective on the social and moral issues he is thus involved in and to try to state his role in such a movement.

The signs of the times indicate to all who have the perspicacity to read them that a significant new movement is getting underway in public education in the United States. This new movement is a spontaneous one, with no central direction or coordination. The impetus for the movement is the concept of bilingualism and bilingual education, with its concomitant and less well articulated concepts of biculturalism or multiculturalism within a single society. It is becoming increasingly apparent that our society is "ripe" for the new movement and for change. Powerful tensions within minority groups give added momentum to the new movement and make changes in our educational policy inevitable. Influential leaders in the dominant society and spokesman of the educational profession increasingly express concern and moral indignation over the plight of non-English-speaking minority groups and give support to the new concept and the new movement. Joseph Stocker writing in the May issue of American Education (1967) calls the school record of the Mexican-American of the Southwest "tragic." Monroe Sweetland (quoted in Stocker's article above) states that this school record "constitutes the greatest single failure of our systems to provide equality of educational opportunity in this region."

One senses at recent conferences on the bilingual child, the culturally disadvantaged child, the socially disadvantaged child and so on, that bilingualism and bilingual schooling has become something of a cause and there is much clamor to climb on the bandwagon. In the keynote speech at the Conference on Development of Bilingualism in Children of Varying Linguistic and Cultural Heritages, held in Austin, Texas, January 31, 1967, and devoted to the writing of guidelines for teachers and administrators, A. Bruce Gaarder of the U. S. Office of Education said:

> "We have the whole tide of events going with us. I could list from all over the country people who are calling, writing, thinking, and talking about doing the same things you are here to do. All over the country, people are beginning to ask themselves: 'How could we possibly have given these bilingual kids such a dirty deal all these years?' 'How is it possible we have done this?' The tide is moving with us. It is no time to be timid about these things; everything is on our side. People are ready for it. They are ready to admit, they are even anxious to proclaim that the other group is all right already. [sic]. For whatever reason, the word is going out

> all over the world, we will help you be human in your own way. We could not have met at a more propitious time. I am so glad to be here and to have a hand in writing this Bible."

Already a number of isolated experimental programs in bilingual schooling are under way in Florida, Texas, New Mexico, Arizona, Colorado, California, and other states. And now, with the proposed new "Bilingual Education Bill" (Congressional Record January 17, 1967, Vol. 113, No. 5) and some thirty other bills pertaining to bilinguals, an attempt is being made to put the full moral pressure of the U. S. Congress and financial resources of the Federal Government behind the new movement.

Bilingualism can be defined as the use of two languages by a single individual, e.g., English and Spanish, as in the Southwest. The truly bilingual individual can function effectively in more than one culture: his own plus another. Bilingual education is the use of more than one language as media of instruction in a single school. From a sociological point of view, bilingual education is essentially the building of bridges across cultural boundaries; and the bilingual individual is the communications bridge between different cultures.[1] In other words a distinction can be made between education and language, between the content of education and the vehicle through which education is acquired. The task of the teacher in the United States has been to expand the experience of the child by giving him a rich, varied, and significant set of experiences and to increase his awareness in many respects. The task of the teacher is to pass on to the child concepts, content, information, knowledge of relationships, attitudes, beliefs, and values. The proponents of bilingual education claim that in the United States education has been confused with the teaching of English. We have assumed that the only way to give all of this wealth of knowledge to the child is through English -- the official school language.

---

[1] What is said of bilingualism applies also in large measure to "bi-dialectalism," that is, the use of two dialects of the same language, e.g., the standard English of the American middle classes and the so-called sub-standard or non-standard English of many American Negroes.

The new movement for bilingual education runs counter to a basic process of U. S. society: the process of linguistic homogenization of peoples. Perhaps both tendencies -- the new bilingualism and the traditional process of a general cultural homogenization -- are complementary manifestations of a greater, international tendency which began in the 17th and 18th centuries with the Enlightenment and which might be called the trend toward worldwide egalitarianism. On the one hand, the older process of homogenization is very much alive and active in our society today as well as in the rest of the world. On the other hand, the opposite tendancy is much in evidence, and it is toward placation of minority groups and assurance that their languages and cultures are intrinsically valuable. In the words of A. Bruce Gaarder, every culture and group is "all right already, that its way of being is uniquely valuable in human terms." The American linguist, Charles Hockett, has humorously referred to this tendency as a "reduction of the heat under the American melting pot" (Lambert, 1967b).

At the heart of the issue for U. S. society is a basic question of values -- and a moral decision. As Senator Yarborough states in his proposed legislation, "This bill is called for on the basis of justice alone." And the choice is apparently being made by leaders of the dominant society and will probably continue to be made in favor of recognition and acceptance of cultural pluralism or multiculturalism within our own society, in spite of traditional and massive contrary pressures toward homogenization. The important question now to be answered is: How do we exploit the potentials of cultural pluralism within our own borders for harmony and good? How do we educate bilingual individuals -- the spokesman of cultural groups and the harmonizers of social and cultural conflict. And how do we avoid the equal potential which is present for harm and disorder, both for the individual and for society.

Given the ever-increasing momentum of such an educational movement, prompted as it is by considerations of morality and justice, is it not too much to hope that the scientific investigation of bilingual education will have a decisive influence on the movement in the future. It seems imperative that if bilingual education is to become consciously institutionalized in our system of education, all the resources of the scientific community should be brought to bear on the questions "How to go about it" and "What specifically to do." The role of scientific investigation should be to make clear what are the consequences of various choices, courses of action, and programs required for the institutionalization of bilingual education and to assess the specific effects on individuals, on social groups, on the community, and perhaps even on the nation as a whole. Bilingual schooling in U. S. society is a complex matter. Because bilingual schooling is already a functional reality in some cultures, does not mean that a similar reality will come about in other cultures. One can as well point to unfortunate experiences of nations with bilingualism and language institutionalization. One important lesson that the cultural anthropologist can teach us is that a functioning society or culture is a unique, integrated system and that attempts at change in one part of the system are likely to have effects and repercussions on other parts -- often seemingly remote parts -- of the system or on the system as a whole. A minimum condition for the success of a particular bilingual school would seem to be that the local community accept the concept of bilingualism and the biculturalism that it entails; and that the members of the community to be willing to change many of their attitudes and assumptions about linguistic, ethnic, and racial differences. This is admittedly no easy matter. Scientific investigation can be useful in assaying the consequences of particular instances of bilingual education. The task is a complex one, calling for new techniques and instruments as well as for the elaboration of a multi-disciplinary approach. Educators, teachers, and parents can hope that scientific study will provide a basis for rational and wise decision-making. The decisions themselves, however, are not the responsibility of the scientific investigator as a scientist.

Very high on the list of priorities in a comprehensive experimental study of bilingual schooling is the development of the necessary instruments for measuring bilingualism *per se* and its relation to the socialization of the child in the setting of school, family, and community. The lack of objective evaluation of recent bilingual programs is conspicuous. The main reason that such evaluation is lacking seems to be that appropriate measuring instruments are not available. This is particularly true for the child's linguistic development. Too often in recent evaluations of bilingual schooling the only recourse is to measure reading and writing ability, using instruments which were designed for monolingual English-speaking populations (Gaarder, 1967). As a result opinion remains somewhat uncertain or divided on the matter of bilingual schooling. Among school administrators the division of opinion is likely to be sharp: either they are passionately devoted to bilingualism or are skeptical of it and hostile towards it. Adequate measuring instruments are needed for evaluating more realistically the progress of children learning bilingually. They are needed for the comparison of programs in different areas. They are needed also to determine the effectiveness of variations in the design of bilingual programs. Such instruments are also needed for more sophisticated comparative studies of bilingual and monolingual children, of bilingually educated and monolingually educated children. The difficulties involved in the construction of bilingual tests and bicultural measures of socialization are very great. There is no reason, however, to suppose that they are insurmountable. The attempt should be made.

METHODOLOGY: Approach to the Measurement of Bilingualism and Bicultural Socialization

CHAPTER II

Anyone engaged in the systematic study of bilingualism is confronted with the problem of defining bilingualism and then with the further problem of determining who is bilingual and to what extent. In modern studies the concept of bilingualism is used in a variety of senses, few of which are very precise. On the one hand, bilingualism is used in a loose and broad sense to include the use of two languages by a single individual, however slight his knowledge of a second language may be. On the other hand, there is the more restricted employment of the term to characterize the use of two languages by an individual with equally good skill. It is evident, however, that bilingualism as an individual phenomenon is a matter of degree. Typically there is variation in an individual's use or knowledge of a second language in the various modes (skills) of language use as well as in the various domains of the linguistic system involved.

The various areas or points where variation in the use of a language can occur with respect to mode and domain can be summarized in the following chart:

Matrix of the Five Domains of Each of the Four Major Language Modes (Skills)

Encoding		Decoding	
Speaking	Writing	Listening	Reading
Semantics	Semantics	Semantics	Semantics
Syntax	Syntax	Syntax	Syntax
Morphology	Morphology	Morphology	Morphology
Lexicon	Lexicon	Lexicon	Lexicon
Phonology	Graphology	Phonology	Graphology

It is equally evident that there is variation in an individual's use of two languages which is related to social context or setting. That is, variation in the use of two languages is related to such factors as when, where, how, and with whom the two languages are used.

It follows that the term "bilingualism" refers to an exceedingly complex phenomenon and that to give a precise definition or characterization of bilingualism in a particular instance is indeed a complex undertaking. Yet, it would seem that the study of bilingualism will have reached an advanced stage of development when investigators--particularly those outside of linguistics--have available to them instruments, devices, or tests which make the concept of bilingualism more precise and which make possible the effective measurement of bilingualism. Haugen pointed out the need for such instrumentation:

"The value of some kind of measure is apparent when one considers the many loose statements in the literature on bilingual skills" (Haugen, 1956, in Saporta, 1961, p. 400). Weinreich (1953, in Saporta, 1961, p. 386) was somewhat skeptical of such measures: "No easy way of measuring or characterizing the total impact of one language or another in the speech of bilinguals has been, or probably can be, devised. The only possible procedure is to describe the various forms of interference and to tabulate their frequency." Weinreich, however, has stated the problem in nearly an insoluable form. Viewing the problem against the background of developments in linguistics, psychology, and language measurement since 1953, one can surely be more optimistic. Admittedly, "no easy way ... can be devised." But adequate measurement need not try to take into account the "total impact of one language on another." To expect this of a measuring device is a misconception of the purpose and use of measurement. The task is indeed a complex and challenging one, calling for new conceptualizations, methods, and techniques as well as an interdisciplinary approach. What seems to be called for is a combination of the approach of modern linguistic theory, which is concerned with language as an abstract system of habits described in terms of sets of signs and rules, and the experimental approach of behavioral psychology and sociology, which are concerned with the set of variables affecting the processes of language use and acquisition. In other words, with a combination of "the structural all-or-nothing, deterministic view on the one hand and the behavioral, more-or-less, probabilistic view on the other." (Saporta, 1961, p.v.) Considering the developments in the new fields of psycholinguistics, sociolinguistic, and anthropological linguistics, there is some reason to be optimistic.

The focus of this research project has been on the development of instruments for measuring child bilingualism -- more precisely children's language competence in English and Spanish -- and bicultural socialization. The latter is commonly referred to in psychology and personality study as the process of adjustment which often includes social, personal, attitudinal, affective, cognigive, and motivational considerations. In the present study socialization or adjustment is measured in a setting where two cultures -- the Anglo and the Mexican -- exist in contact and where the school attempts to teach in both English and Spanish.

The instruments developed are intended to serve two purposes: 1) as research instruments which can be used in the empirical investigation and evaluation of bilingual educational programs, and 2) eventually, after multiple administrations of the instruments have been made, as standardized tests which can be used by administrators and teachers concerned with the development of bilingual education in the Southwest. This latter purpose has placed several limitations on the type of instruments to be developed. First, the instruments had to be such that they could be administered and scored by personnel normally present in the school. A requirement was acknowledged that no specialized training would be required for their administration and use. Second, this limitation meant that no electronic recording apparatus would be used.

The approach to the problem of the measurement of bilingualism and bicultural socialization taken in this research project can be presented by contrasting it with other approaches to the problem.

The psychologists who first began the psychometric study of bilingualism were not interested so much in bilingualism per se as in the effects of bilingualism on children's scholastic achievement and intellectual functioning. Before 1950 a large number of studies were carried out to determine the relationship between bilingualism and IQ (Darcy, 1953) on the one hand and between bilingualism and scholastic attainment on the other (Macnamara, 1966).

Many of these studies, particularly the earlier ones, seem inadequate in retrospect because bilingualism was poorly defined and social variables were seldom held constant. Perhaps of equal importance, little attention was paid to the different kinds of settings, situations, and communities in which bilingualism existed (for a recent outline of such settings, see Fishman, 1967a) and little attention was given to prevailing attitudes toward languages and their speakers in different bilingual situations (Fishman, 1966b). Also characteristic of many of these studies was a naive and unquestioning use of IQ tests. George Sánchez pointed out emphatically and from the beginning the weaknesses in the use of such measures for these purposes (Sànchez, 1932, 1934a, 1934b). Later Tireman (1941, p. 344) reiterated "Research with bilingual children has been impeded by a lack of suitable measuring instruments and disagreements among psychologists on basic principles." Finally, Haugen (1956, in Saporta, 1966, p. 396) concluded that "the intelligence test is too gross a measure to throw much light on the psychological processes of bilingualism."

One of the recent and more sophisticated studies of the relationship between bilingualism and intelligence (Peal and Lambert, 1962) showed results which were contrary to many earlier findings: that bilingualism *per se* did not have a retarding effect on intelligence.

Recent studies of bilingualism, which largely begin with those of Weinreich (1953) and Haugen (1956), in general aim to explain bilingual functioning itself and many approaches to the problem of the measurement of bilingualism have been elaborated (Macnamara, 1967).

A loose classification of these approaches can be made by distinguishing two general types of studies. This distinction corresponds to that made earlier between the linguistic and sociological aspects of bilingualism. One is concerned with what the bilingual does with his language, with where, when, how much, and with whom he uses his languages; and the other is concerned with how well the bilingual knows his languages. Of the two approaches the former is clearly the less developed.

An example of the former approach is provided by Mackey (1964) who stated "We are not concerned with how well the bilingual knows his languages but rather with what he does with them. We are interested in when, where, and with whom he uses each language, and to what extent." Mackey then elaborates methods, procedures, and techniques for carrying out such measurements.

The instrument which has most frequently been used to determine what the bilingual does (in a sociolingual sense) with his language is a language background questionnaire. Most language background questionnaires, which are derived from the work of Hoffman (1934), require the bilingual subject to estimate the extent to which he uses each of his languages with various individuals and in various social contexts. Such a technique is not likely to be very reliable in many cases. For example, the Irish government pays £10 per annum per child to parents who make Irish the language of the home (Macnamara, 1967a). The effects of such a practice on this technique, as Macnamara points out, would be obvious.

Clearly, this type of approach needs further development and refinement. What seems to be called for are techniques similar to those developed by Labov (1966) for the study of dialect variation. Hymes (1967) has suggested that the study of bilingualism is part of a more general study of code-repertoires and code-switching and has proposed a taxonomy for such systems as well as a model or theory for description, which should be of use in the development of measuring techniques.

The latter type of approach, concerned with how well the bilingual knows his languages, is the more common one. Most of the attempts to measure an individual's knowledge of two languages -- or bilingual competence -- have used indirect measures of bilingualism. That is, in order to get around the difficulties involved in measuring directly the skills of speaking, listening, reading, and writing, indirect indices have been devised. Often such indices are ingenious and have the advantage of being easily administered. Such measures are typically used by psychologists who are not particularly interested in the interaction and conflict of the two linguistic systems involved.

Macnamara (1967a) has loosely classified these indirect measures under four headings: rating scales, tests of verbal fluency, tests of verbal flexibility, and tests of dominance.

Rating scales require bilingual subjects to rate their own linguistic skills in each of their two languages. Such scales are obviously weak because of varying attitudes toward grading. Subjects typically over-rate their skill in a second language.

Fluency tests use a variety of measures of speed of responding or speed of verbal production. Ervin (1961) used a picture-naming test which gave scores which consisted of a number of pictures of certain objects named by a bilingual in a specified time in each of his languages. Rao (1964) used a test which measured the speed with which bilinguals follow instructions given in two languages. Several other measures of fluency have been devised by Lambert and his associates (1955, 1959, and 1967). One test measured reaction time in response to instructions to press keys. Another required subjects to write from memory French and English words beginning with a particular pair of letters. Scherer and Wertheimer (1964) have developed an "assimilation of meaning" test which requires subjects to respond so as to indicate as quickly as possible whether statements are true or false. Johnson (1953) and Macnamara (1967c) used tests which required subjects to say as many different words as they could in one language, then the other, in a given time span. Many of these measures of fluency are ingenious and convenient; however, it remains to be determined how well they correlate with direct measures of bilingual language skill.

Flexibility tests can be illustrated by means of an example. Macnamara (1967d) devised a richness of vocabulary test in which bilingual subjects were presented with a series of phrases, parts of which were italicized, and subjects were asked to give synonyms or near synonyms for the italicized parts of the phrases. Lambert's word detection test (1959b) required subjects to identify as many words (in two languages) as they could find in a long nonsense word.

Dominance tests confront the bilingual with ambiguous verbal stimuli (which could belong to either of two languages) and require him to pronounce or interpret them. Lambert _et al_ (1959b) presented bilinguals with lists of words to be read aloud, some of which were ambiguous, e.g., _pipe_ which is both English and French, but pronounced differently.

Lambert, Havelka, and Gardner (1959) have gone further with indirect measurement of bilingualism by combining a variety of such measures into a comprehensive battery. They have found that all such measures are intercorrelated and could be interpreted as measuring a single factor. Such findings suggest that one may postulate a single, uniform, underlying skill, ability, or competence in a language.

The majority of linguistic studies concerned with the description of bilingualism consist of "after-the-fact" analysis of samples of the two languages (see Weinreich, 1953, in Saporta, 1961, p. 386). Weinreich has further suggested that the most appropriate technique for such study is a "during-the-fact" analysis of such speech samples (Weinreich, 1953, in Saporta, 1961, p. 385). In the collection and analysis of such "after-the-fact" and "during-the-fact" samples of language the standardized experimental situation (as is present, e.g., in a test situation) is absent. The results of such methods of analysis can be productive of insights when dealing with a single bilingual speaker. However, results of such methods with a group of bilingual individuals are hardly comparable. Such results would not be particularly amenable to sophisticated statistical analysis and interpretations. What one could do with such results would be, as Weinreich says, "to describe the various kinds of interference and to tabulate their frequency."

Another possible approach to the measurement of bilingualism would seem to be that represented by the construction and use of parallel educational tests (Manuel, 1962-66). What is involved in such an approach is the construction of tests which are equated with respect to scholastic and intellectual content. Such an approach, however, if it is to be a fruitful one, if an exceedingly difficult undertaking. What is required is the construction of testing items which are equal with respect to semantic content. It would seem that even in the domain of lexicon there would be few equal sets of lexical items in both languages which would be truly comparable for a given bilingual speaker. More likely the languages of each bilingual speaker would be restricted to or specialized for different language modes (skills), linguistic domains, and social contexts. Of course, it is quite easy to equate or translate words from two languages, e.g., compiling a bilingual dictionary. However, one can be skeptical that such a neat and comprehensive statement or record of correspondences exists in the mind of a given bilingual individual or could be manifested by his use of his two languages in such a form. The bilingual dictionary is probably a very crude model of the bilingual's lexical knowledge of two languages. It is hardly an adequate basis for constructing equal and comparable tests of vocabulary in two languages. Perhaps some of the work in machine translations would be applicable in the construction of parallel tests.

Parallel languages tests, as they are usually constructed, seem to provide little basis for insight into the linguistic functioning of the bilingual and little foundation for bilingual measurement since they typically take little account of the formal linguistic systems involved. They fail to take systematically into account the structural characteristics of the two languages involved and specific problems of interference.

The preceding review provides a background for presenting this project. The main ideas behind the present approach are certainly not original. They have been presented in embryonic form by others in many places. They reflect recent developments in linguistic theory, psycholinguistics, sociolinguistics, foreign-language testing, and psychometrics.

This approach focuses on the development of instruments for measuring child bilingualism in English and Spanish and for measuring bilingual socialization or acculturation of children in the school setting.

This approach derives from modern linguistic theory, particularly that of Chomsky (1965). The Chomskian notions of "competence" and "performance" as well as the older de Saussurian notions of *langue* and *parole* are useful in conceptualizing the problem of language testing and of the measurement of bilingualism. An individual's competence, or his abstract knowledge of a language can be judged in practice only from the performance of that language.

In a real sense there is no way to measure competence directly. The problem is to attempt to eliminate or hold constant linguistically irrelevant conditions such as memory limitations, distractions, random errors, experiential content and intelligence, which are involved in performance, and to determine on the basis of the residual data of performance how well the child has automatically and unconsciously mastered the underlying system of signs, structures, and rules of a language or of two different languages.

The present approach makes use of data derived from contrastive linguistics as set forth by Fries (1945), Weinreich (1953), Haugen (1956), Lado (1957), and more recently for English and Spanish, Stockwell, Bowen, and Martin (1965, 1965). More importantly, this approach attempts to make use of the theory and methods of foreign-language or second-language testing. The theory underlying recent foreign-language testing is based on present understanding of language as provided by linguistics and on observations of the role of habit in learning a foreign language. The theory is congruent with psychological knowledge and thinking but constitutes an organization of the problem that is not found in textbooks of psychology at the present time (Lado, 1961, p. 22).

This theory has been best presented by Lado (1961):

> The theory of language testing assumes that language is a system of habits of communication. These habits permit the communicant to give his conscious attention

to the over-all meaning he is conveying or perceiving. These habits involve matters of form, meaning, and distribution at several levels of structure, namely, those of the sentence, clause, phrase, word, morpheme, and phoneme. Within these levels are structures of modification, sequence, parts of sentences. Below them are habits of articulation, syllable types and collocations. Associated with them and sometimes as part of them are patterns of intonation, stress and rhythm.

The individual is not aware that so much of what he does in using language is done through a complex system of habits. When he attempts to communicate in a foreign language that he knows partially, he adopts the same linguistic posture as when using the native language. He thinks of the over-all meaning and proceeds to encode it in the linguistic forms of the foreign language. He may concentrate consciously in addition on one or another matter of grammar or pronunciation or vocabulary, but the bulk of the encoding goes to his native language. This in psychology is known as transfer. He transfers the habit system of his native language to the foreign language.

When this transfer occurs, he produces the sounds of his native language and the sentence patterns of his native language, in short the entire structure of his native language is the foreign one, except those few units and elements he is able to keep under conscious control and those he has mastered to the point of habit. If his attention is brought to something he has missed and already knows at the conscious level, he will correct himself but may miss something else instead. Several repetitions may produce enough immediate memory to result in satisfactory production, but when the same problem is met elsewhere it may be missed again.

When this transfer occurs, some of the units and patterns transferred will function satisfactorily in the foreign language and will not constitute a learning problem. Other units and patterns will not function satisfactorily in the foreign language. Against these the student will have to learn the new units and patterns. These constitute the real learning problems.

> The theory assumes that testing control of the problems is testing control of the language. Problems are those units and patterns that do not have a counterpart in the native language or that have counterparts with structurally different distribution or meaning....
>
> The theory assumes also that the student does not know these units and patterns that are problems unless he can use them at normal conversational or reading speed in linguistically valid situations, that is, situations that parallel those of language in use. (Lado, 1961, pp. 22-24)

The two batteries of language-testing instruments developed aim to measure the bilingual competence of the child by using test items based on some (not all) of the specific structural and semantic problems that the child encounters in learning and using a second language. In other words, a contrastive linguistic analysis of English and Spanish was used to pin-point specific language problems that a native Spanish-speaking child has in learning and using English and that a native English-speaking child has in learning and using Spanish. As an illustration one may consider the sounds [s] and [z] of the words ice and eyes, which exist as well in the sound system of Spanish. The function of these two sounds differs in English and Spanish and constitutes a learning problem only for the native Spanish-speaking child learning English. In Spanish, these two sounds carry no functional load. They do not distinguish meaning or keep utterances apart. In technical linguistic terms, they are allophones of the same phoneme /s/ in Spanish. They are, in other words, psychologically the same sounds for the native Spanish-speaking child.

He cannot hear or produce this distinction easily or "naturally". In English, however, these same two sounds function to differentiate meaning, as exemplified in the two words ice and eyes, where the two words differ only by the contrast of [s] and [z]. Thus, the native Spanish-speaking child must relearn and reconstitute his linguistic and psychological habits in order to "know" this distinction in English. For the native English-speaking child learning Spanish, there is little or no problem. He must simply learn to collapse the distinction of [s] and [z] that he habitually makes in using English. Even if he does not, his use of the two sounds indiscriminately in Spanish will cause no major problems of misunderstanding or confusion of meaning. It will only result in an "accent" in Spanish.

If in a test situation the native Spanish-speaking child can consistently distinguish between such words as ice and eyes, sip and zip, racer and razor, in speaking and listening to English, then one can assume for purposes of measurement that the child "knows" a specific part of the underlying system of English, that he has competence in English with respect to the specific phonemic contrast /s/ and /z/. Similar techniques were devised for testing in the domains of grammar.

A more conventional approach to item selection and construction was also employed, particularly for the sub-tests that did not rely heavily on a contrastive analysis of English and Spanish as a basis for selecting and constructing items, i.e. Sub-tests V and VI. The curriculum and language matteriels useo in three bilingual programs in South Texas were examined. Also, other curricula and materials for teaching English and Spanish as foreign language in the primary grades were also reviewed. Frequency lists of English and Spanish lexical items were also consulted, but not relied on too heavily - since they had little or no relevance for the oral vocabulary of the English and Spanish spoken in the local area. A few studies of South Texas or Border Spanish were available for consultation. All of these were sources for items in the language batteries. All items were then submitted to a number of bilingual primary teachers for revision and correction. Several trial administrations were given and further revision and corrections were made before the final administration was held.

Such testing techniques, or even a combination of such techniques, cannot hope to measure the "total impact of one linguistic system on another." Moreover, it is also clear that the notion of "competence" has been given a different and more restricted definition in this context. Competence no longer means control or knowledge of the abstract underlying system of signs, structures and rules, but "control" or "knowledge" of certain selected problems of interference. The kinds of devices required to measure bilingual competence in this sense were a carefully selected set of techniques and testing items which enable the tester to "take a reading" on language performance in some linguistic modes and with respect to the various linguistic domains. It is probably the case that an adequate and useful battery can be devised that does not take a reading on all or even most of the modes and domains involved. The results of indirect testing of bilingualism, referred to before, suggests that in many cases there may be a single factor of competence underlying the various linguistic domains and modes.

The present approach to the measurement of bilingualism, it is to be reiterated, is one of testing. That is, a number of presumably bilingual children were confronted with a uniform, standardized situation and a language stimulus and their responses -- linguistic and nonlinguistic -- were recorded or judged. The response or data thus recorded is amenable to statistical analysis and interpretation.

Weinreich's estimation of the usefulness of testing as a means of measuring bilingualism or quantifying interference is unfavorable. He stated (1953, in Saporta, 1961, p. 387), "For the very special type of speech situation in which a speaker consciously tries to suppress interference as fully as he can, the customary language-proficiency test is a practical, summary measure of interference. Its validity is limited by the unusualness of the testing situation, by the ordinarily crude classification of errors, and by the fact that poverty of expression in the second language is as a rule not recorded as a lack of proficiency, even though it is a result of interference." And "the foreign-language proficiency test can be employed as a crude instrument, especially if response time and similar factors are taken into account." Perhaps Weinreich's estimation of "language testing" was justified in 1953; it is unlikely that it remains so today. An argument could be made that he overemphasized the "unusualness of the testing situation." Certainly the testing situation is less unusual for children in school today. Weinreich did not anticipate the sophisticated language-testing techniques nor the sophisticated classifications of "errors" of today. Moreover, the principle objection that Weinreich has to language testing does not arise for the present approach. This approach is directed at child bilingualism and it is unlikely that children of age 5 to 8 would consciously try to suppress interference as fully as they can. There is little reason to suppose that children of this age have developed the awareness and anxieties typically associated by adults with the "testing situation." There is reason to believe that such language tests can be presented to children in an atmosphere of play.

In this connection it is important to indicate the type of language performance and the kind of social testing situation that was emphasized in this approach. In accordance with the theory of foreign-language testing, the language batteries of English and Spanish aimed to measure language competence through "authentic" uses of language as an instrument of communication and interaction and not as an academic, literary, or intellectual exercise. Likewise, traditional, puristic, and authoritarian notions of "correctness" were largely put aside. The test batteries focused on the oral and aural use of language in realistic situations, that is, situations which approached realism from the point of view of actual everyday communication as well as from the point of view of the children tested. Children were tested in situations that were familiar to them in kindergarden, preschool training (e.g. Head Start), and school. Also, each particular language sub-test was preceded by a period of practice. It was important that the child be given training in making language responses and judgments such as were required of him on the test. The tester was given instructions to proceed with the test only after each child demonstrated in practice that he understood what was expected of him on the test. The rationale behind such qualification of the testing situation was to diminish the effects of non-linguistic factors (e.g. intelligence) involved in the child's language performance.

The language batteries employed local dialect norms. The selection of appropriate dialect norms for English and Spanish in the Southwest was mainly a matter of lexical items. The language batteries were administered in all cases by speakers of the local dialect.

With regard to the selection of the types of testing techniques group testing was certainly the most feasible. However, this was not always possible, e.g. for the tests of speech production. It is possible, however, to adapt all techniques to individual administration. This would probably be necessary for younger children.
To the extent possible, techniques were used which approximate face-to-face oral communication or which parallel actual communication of children in school and children in the teacher-child or teacher-children relationships, e.g., responding to questions, asking questions, carrying out commands, indicating pictures and objects, listening to short passages of connected utterances (e.g. listening to a riddle), indicating whether two words or phrases sound the same or not, repeating utterances after the teacher, doing pattern drills, indicating whether a sentence sounds "right" or not, and making unconscious and automatic judgments about utterances.

Also, the sentence or utterance - not words in isolation - was used as much as possible in testing since it more closely approaches a "normal" unit of communication. Also, for the sub-tests which were given individually it was desirable to specify in the instructions to the tester a routine for repeating a language stimulus in a test situation if a child _spontaneously_ signals by means of an appropriate utterance, interjection, or gestures that he did not hear or that he wishes the tester to repeat, e.g. "Uh?" in English and "Eh?" in Spanish. Such a routine is called for because of its extreme commonness in actual face-to-face conversation.

The scoring of each language response of a child in an individually administered test required the tester to make a single observation and a single judgment. In each case, specific criteria for making such judgments were supplied. Also, the tester was instructed to record every instances of code switching. It was presumed that this type of response would be common in the speech of young children.

Once such a dual battery of tests have been administered to a bilingual child and sub-scores are available from each sub-test in each language, then several methods of expressing bilingual competence in a formulaic fashion are possible (See Haugen, 1956, in Saporta, 1961, p. 400). Each child's competence in each language can be stated separately, by means of sub-test scores or a total score. Such scores can then be compared with those of monolingual children or with those of other bilingual children. Or the sub-scores and the total scores in each language can be compared and a bilingual quotient derived. Such a procedure is recommended by Weinreich (1953, p. 75.). Also, the amount of code-switching can be tabulated to determine the extent to which the child has mastered this special problem of bilingualism.

Measurement of Bicultural Socialization

With regard to the measurement of the larger social context of bilingualism - the process of socialization, acculturation, or adjustment - an attempt was made to measure the bilingual child's socialization as it is reflected or manifested in his non-linguistic social behavior in school. Of course the most convenient measure of bicultural socialization would probably be the degree of bilingualism, since language is probably the most important single factor involved in the process of socialization. However, such measures would provide little insight into the more typical processes involved in such bicultural socialization.

Two types of instruments were developed for the measurement of bicultural socialization of children. These instruments attempt to be culturally fair, accurate, and relevant. In constructing such instruments, conventional techniques were employed, such as are used in the construction of measures of adjustment, which use observers rating scales. The construction of these rating scales involved the selection of specific behavioral patterns which are equivalent or roughly comparable in the two cultures. Such behavior patterns were typically indicative of "good" and "bad" socialization or adjustment. Existing instruments and the standard works on the psychology of adjustment were consulted. Ethnographic descriptions of sub-groups within the United States were examined, e.g. Madsen (1965) and Landes (1965). Finally, intuitive knowledge of typical patterns of behavior in each culture was relied upon. All of these sources supplied a list of roughly comparable behavioral characteristics in two cultures. The two instruments required that observers of the child rate his behavior in terms of frequency, amount, or intensity (on scales from 1 to 4 or from 0 to 5) for each specific behavioral pattern. One instrument is concerned with very specific patterns of behavior - including aspects of vocalization and vocal qualification, (Trager, 1958) gestures, body motion, posture, body contact and interactional distance - which were of very short durations and which related mainly to communicative and inter-personal interaction. The observations were based on a short interview of 10 minutes duration. The interview was conducted in the child's native language. The interviewer and observer was the same person. The interview consisted of a series of questions and directions to do and say certain things. The interviewer-observer was provided specified criteria for evaluating the responses of the child. The interviewer's verbal stimuli were directed essentially at the social-personal responsiveness of the child. Immediately after the interview was completed, the interviewer-observer rated the child's behavior with respect to each specific behavioral pattern on the instrument.

The second instrument attempted to record very gross, more complex, and long-lasting patterns of behavior over an extended period of time. This instrument was completed by an individual who had had extended contact with the child, e.g. his teacher or a teacher's aide.

However, it was the case that no single list of behavior characteristics and patterns could pretend to be culturally fair, equivalent, or equally relevant for both cultures. Some improvement could probably be provided by using such a list of behavioral characteristics in both languages. Once an attempt was made to translate the list from one language to the other, the original specification of behavioral patterns would probably have to be modified. But what was still more appropriate was to devise a system of weights which could be added to the observer's original rating of each behavioral pattern. On the one hand, a single system of weights was utilized by means of which a single bicultural measure of socialization could be derived. Such a system of weights was arrived at by having a number of Anglo-American and Mexican or Mexican-American teachers with experience in teaching children rate each of the behavioral patterns encompassed by the two instruments for its importance in indicating negative or positive socialization. The mean ratings of all teachers represent a single, bicultural system of weights, which can be multiplied by the original ratings of the child.

On the other hand, separate Anglo-American and Mexican-American systems of weights can be arrived at by taking the mean ratings of the Anglo-American and the Mexican-American teachers separately. Each of these two systems of weights can be multiplied by each of the original ratings to give an Anglo-American and a Mexican-American norm or interpretation of socialization. In each case the socialization of the child can be expressed in formulaic fashion as two numbers indicative of negative and positive socialization, or else by a single number, by subtracting the negative index of socialization from the positive one. One can also express such socialization formulaically as a quotient. The socialization of each bilingual child can thus be expressed in terms of three different value systems: in terms of a super-ethnic or bicultural value system (which would constitute a statistical combination of evaluations of child behavior by Anglos and Mexicans), in terms of a purely Anglo value system, and in terms of a purely Mexican value system.

Examination of the ratings on children with regard to behavioral patterns furnish insight into the specific characteristics of bicultural socialization. The over-all index of a child's socialization is meaningless in itself. These indices of socialization derive their meaning by comparison with other such indices of socialization of monolingual children or with such indices of other bilingual children.

COLLECTION OF DATA: Subject Population and Test Administration

CHAPTER III

The final test administration was given on May 17-19, 1967, to a random sample of 97 first-grade pupils who were in an experimental language program at the Garfield Elementary School in Del Rio, Texas

Del Rio is a bilingual and bicultural community located on the Rio Grande River on the Texas-Mexico border. It is situated 150 miles west of San Antonio, Texas, which is perhaps the most truly bilingual and bicultural large city in the United States. The population of Del Rio is 25,000, composed of 65% Spanish surnamed inhabitants and 35% Anglo named inhabitants.

Del Rio has about 7,500 school-age children. The Garfield Elementary School is one of three elementary schools in the Del Rio Independent School District. There is one other school district in the city and parochial schools in three parishes of the Roman Catholic Church. Garfield Elementary School enrolls a peak enrollment of some 800 pupils in grades one through four. Approximately 80% of these pupils are Spanish-surnamed, 18% are Anglo-surnamed and about 2% are Negro. There are 25 classroom teachers, 13 special teachers and administrators, and 11 teacher aides. Twenty-seven of these are Anglo-named, nineteen are Spanish-named, and three are Negro.

The Garfield Elementary School's program in bilingual education was inaugurated at the beginning of the 1966-67 school year. The school at that time had eight sections of grade one. Four sections of this grade were selected as groups in which both Spanish and English were to be used as media of instruction. The four remaining sections of the first grade were designated control groups and received instruction in the traditional manner: only in English. The four teachers in the four experimental groups were Mexican-American bilinguals. Spanish was their mother tongue and they had had formal training in Spanish in secondary school and college. Each teacher was responsible for the teaching in both Spanish and English in the classroom. A teacher's aide was provided for each of the four experimental sections. Two of these were Mexican-Americans and two were Anglos with a basic understanding of Spanish. The four control groups were taught by English monolinguals: three Anglos and one Negro. Only one of the sections had a teacher's aide.

Experimental Section X1 and Control Section C1 were composed of pupils approximately half English-surnamed and half Spanish-surnamed. All Spanish surnamed pupils in these two sections had a knowledge of English at the beginning of the school year which was sufficient for them to participate adequately in classes with English used as the language of instruction. Experimental Section X2 and Control Section C2 were composed of Spanish-surnamed pupils, approximately about half of whom had been retained in grade. Experimental Sections X3 and X4 as well as Control Sections C3 and C4 were composed of Spanish-surnamed pupils who had little or no knowledge of English at the beginning of the school year.

Spanish, the language added as a medium of instruction in this program, was the mother tongue of all pupils in Sections X2, X3, and X4. Spanish was a second language for the English surnamed pupils in Section X1 and the mother tongue of the Spanish-surnamed pupils in Section X1. In the experimental sections Spanish was used as a medium of instruction from 30 to 45 minutes daily during the first month of the program; by the fourth month, approximately 60 minutes daily; near the end of the year, approximately 90 minutes. The classroom activities developed through Spanish were in the Language Arts area generally. However, bilingual teachers in the areas of music and physical development extended the program through integration of the offerings with their special areas of music, health, safety, and play. The materials center of the school's library had books in Spanish, film strips, and recordings available for reinforcing the teaching of Spanish.

On May 17-19, 1967, the final test administration was held. The eight teachers of the four experimental and four control groups, as well as the five teacher's aides, were given the second part of the Inventory of Socialization, Record of Observations of School Adjustment and Behavior, two weeks prior to the administration date. As a minimum, it was decided before hand to test every third pupil on the rolls in both control and experimental sections. Later this was amended to include every other one of the remaining pupils on the rolls of the experimental groups.

Forty children in the control groups received only the English series and the Inventory of Socialization. Fifty-seven pupils in the experimental sections were given the English and Spanish series as well as the Inventory of Socialization. Since the English and Spanish tests were comparable tests -- in part equivalent tests -- but in different languages, it was thought necessary to take some account of possible contamination of result of the children taking both tests. This was provided for by giving the English series first to Experimental Sections X1 and X3 and the Spanish series last; and by giving the Spanish series to Sections X3 and X4 first and the English series last.

The language competence series in English and Spanish were designed as tests of competence in or control of a second language. Control of the specific structural problems due to interference of a child's native language in his second language was assumed to mean control of the second language. It was further assumed that a child taking the language competence series in his native language would make a near-perfect score since the specific problems of interference would not be involved. To test this assumption the language competence series was administered in the native language to all 57 pupils in the sample of the experimental groups. For the five native English-speaking pupils in the one control section, the language competence series which they received was also only in their language. It is important to keep this distinction regarding second-language and native or first-language testing in mind in evaluating the results of the tests.

After the final test administration was completed the eight teachers involved were asked to comment on the tests and test administration in writing. Their comments represent an informal evaluation of the instruments from the point of view of the teacher and test-administrator.

The teachers' comments revealed a series defect in the instructions given to the pupils for marking the sub-tests of Pronunciation and Grammar. This was an obvious error which, unfortunately, was caught by no one during the trial test administrations. For these two sub-tests, the child's answer sheet appeared with two circles -- one white and one dark. By marking one or the other, the child indicated a phonemic discrimination or an automatic judgment about a sentence. The original instruction called for the child to "circle" either the white or dark circle.

This instruction proved confusing to the child in the opinion of six of the eight teachers. One teacher -- that of Section X3, took the liberty to change this instruction so that the child marked with an "X" and not with a circle. This revision was congruent with all the other marking that the child was required to do. This revision has been incorporated in the version of the instruments presented in Appendix A.

Five of the eight teachers commented that the children enjoyed taking the tests, particularly No. II. Comprehension of Commands and Directions, and the two tests which had pictures on the child's answer sheet. Several teachers added that the tests were enjoyable because they were within the ability range of their students. One teacher said that her children "understood what was expected of them." Two teachers reported that the tests were too easy, particularly for high first graders. Several teachers pointed out that the sub-tests of Pronunciation and Grammar were the most difficult for their pupils.

Two bilingual teachers reported that there were still words and expressions in the Spanish test which were not familiar to their students and which were not the typical words and expressions in their local dialect.

Several teachers suggested that the tests could have been given much earlier in the year. This suggests that the language competence series could be used as pre-tests near the beginning of the first grade. This was in fact one of the intended uses of the tests.

One teacher reported that Item 1 of Sub-test I in English, Recognition of Question and Interrogative Patterns, "Who is your best friend at school?", caused embarrassment to some students because in English "best friend" suggested "girl friend" or "boy friend" to them.

One teacher suggested that coverage of English prepositional usage was not extensive enough.

Two teachers complained that some of the behavioral characteristics on the Inventory of Socialization were neutral -- i.e., indicative of neither positive or negative adjustment. Perhaps this feature was undesirable to the extent that it troubled some teachers. However, by adding weights to each teacher's rating, as was provided for, which take into account the relative importance of each behavioral characteristics in indicating over-all adjustment (weights which were derived from the teachers' own rating of the behavioral characteristics), neutral characteristics would be taken into consideration proportionately. It so happened that in the case of several behavioral characteristics, the weight to be added was zero. This meant that the teachers' rating of each child on these two traits was multiplied by zero in calculating the over-all indices of adjustment. Thus characteristics which were judged to be neutral by the teachers, were neutralized in arriving at the over-all indices of adjustment.

ANALYSIS OF INSTRUMENTS: Validity, Reliability, and Item Analysis

CHAPTER IV

Here an attempt is made to analyze the language tests with respect to validity, in other words, to ascertain if and how well the battery measures language competence of children in English and Spanish. The objective aimed at in developing the bilingual language battery was to construct instruments which would measure control of certain representative linguistic structures by a child in his second language. These second-language tests (one of English and one of Spanish) were designed so that if they were given as native-language tests to children who spoke the language as native languages, such children would make near-perfect scores. That is, if the Spanish Competence Series was given to native Spanish-speaking children and the English Competence Series to native English-speaking children, both groups of children would, hopefully, obtain near-perfect scores. The extent to which this is not achieved on a particular sub-test, is an indication of defects in item selection and construction and/or in testing technique.

Stated in still another way, the objective was to include only items which the normal child has mastered in his native language by the age of seven or thereabouts. Such a methodological procedure is necessary if one is to state convincingly, when one attempts to measure second language competence with these instruments, that one has actually measured language competence and not something else (e.g. intelligence or achievement). Taking the case of the English Competence Series, if native English-speaking children of seven consistently and uniformly make a perfect or near-perfect score on this series of tests and if this same series is given to a native Spanish-speaking child who is learning English, then the score obtained by the Spanish-speaking child should be a valid indication of his knowledge of English in comparison with that of his English-speaking peers. If he makes a score approaching that of the native English-speaking children, one can say that such a child knows English or knows English as well as a native-speaking child comparable to him in age, scholastic achievement, etc.

The basic problem involved in following such a principle in second-language test construction is to prepare a test on which native-language-speaking children will uniformly and consistently make near-perfect scores but on which non-native speaking children will achieve varied scores, depending on their degree of command of the language, that is, a test which encompasses a uniform basic competence which all native-language speaking children possess but which has discriminatory power or range when given to non-native language speakers.

Thus, the great advantage of second-language test construction -- which is largely absent in construction of conventional tests of human abilities -- is that the test-maker has available a means of ascertaining content validity other than by mere inspection and intuitive judgment. Before a second-language test is given to the population for which it was designed -- that is to the learner or user of a second language -- it can be given to a comparable population (comparable with respect to age, schooling, etc. but not of course language) who knows and speaks the language of the test as a native language. In effect, this amounts to an empirical method of ascertaining content validity.

The task of ascertaining empirical validity in the usual sense for such second-language tests is an additional one, which must be based on the performance of second-language learners. For this task, the more conventional principles of ability testing and measurement become relevant. The notions of standard deviation and internal consistency become useful devices in ascertaining the empirical validity as well as reliability of such instruments.

The basic methodological procedure employed in the construction of these tests follows from a theoretical assumption and a commonly made observation in scientific language study, namely, that every normal native-speaker of a language has mastered the basic structure of his language by the age of six or seven. This assumption also implies that every normal native speaker of a language (over six or seven years old) has an equal or near-equal mastery or knowledge of the basic structure of his language. Such an assumption appears justified only if one considers what is meant by the terms "mastery," "knowledge," and "basic structure of language" in this context. Certainly there are a great number of language-connected skills and abilities which are variable from individual to individual. However, mastery or knowledge of the basic structure of one's language is probably only one factor in such skills and abilities. Mastery or knowledge of the basic structure of a language (or "competence" in the context of this project) means intuitive, automatic, and unconscious control of phonemic structure, common morphological and syntactic patterns, and a basic vocabulary. Furthermore, one can assume that this mastery, knowledge, or competence is located within the individual speaker as a system of psycho-motor-perceptual habits.

An over-all assessment can be made of the content validity of the language competence series in English and Spanish by examining native-speaker performance on each series. The 12 native English-speaking children who took the English series achieved the following mean scores: (Standard deviations and indices of internal consistency are also given, even though they are largely meaningless considering the size of the sample and the purpose of this particular administration)

ENGLISH COMPETENCE SERIES: Native Speaker Performance

Sub-test	Number of Items	Mean Scores	Standard Deviations	IC
I	25	24.25	1.6394	.7967
II	25	24.5833	.4930	1.0
III	30	28.0833	2.8711	1.0
IV	30	23.8333	3.7823	1.0
V	63	62.0833	1.2555	.5103
VI	20	18.333	1.4337	.6543

Even though the sample is too small to permit definite conclusions, the above mean scores for Sub-tests No. I, II, III, V and VI suggest that near-perfect scores had been obtained. That is, one can expect that normal native English-speaking children can consistently and uniformly perform all the tasks involved in these sub-tests. The lower mean scores for III suggest either a slight weakness in testing technique or that a non-linguistic factor is involved. The higher SD for III also confirms that this sub-test is measuring a more variable ability. A more serious weakness in sub-test IV is indicated by the low mean score and the greater SD. More than likely the defect is in the testing technique. This sub-test required the child to make a judgment of good or bad, right or wrong, correct or not correct with respect to spoken sentences. Children of seven probably do not have the language consciousness called for by this test. The test was too intellectual and involved attitudinal and affective factors relating to "correctness" or social acceptability in language. Consequently, the results obtained with this sub-test must be viewed with some caution.

The over-all content validity of the Spanish Competence Series can be assessed similarly by examining the performance of native Spanish-speaking children on the various sub-tests. The fifty subjects achieved the following results:

SPANISH COMPETENCE SERIES: Native Speaker Performance

Sub-Test	Number of Items	Mean Scores	SD	IC
I	25	21.32	2.6791	.7056
II	25	22.5	2.0518	1.0
III	30	24.94	4.7304	1.0
IV	30	20.36	3.6974	1.0
V	63	61.16	1.8693	.5786
VI	20	16.2857	2.1853	.5786

The mean scores here are consistently 2 to 3 points below those of native English speakers on the English Competence Series. In all cases except Sub-Test IV the SD's are greater. The weaknesses indicated in English Sub-test No. IV with regard to testing technique also show up in Spanish Sub-test No. IV which has a mean of 20.36. The ovcr-all content validity for the Spanish Competence Series is not as convincingly established as in the case of the English Competence Series. If one makes the same assumption and adheres to the same methodological principle as in the case of the native English-speaking children, namely, that the native Spanish-speaking children tested should have a near-perfect competence in their native language, then the Spanish Series falls somewhat short of measuring what it was intended to measure. A number of factors are probably responsible for the lower content validity of the Spanish tests.

First, the testing techniques are probably defective. The lower mean score on Sub-test III in Spanish is probably due to the fact that minimal pairs of words (i.e. pairs of words that differ by a single sound) utilized in this case are much rarer in Spanish than in English. Consequently, words of lower frequency of occurrence (words likely to be less known by children) were employed in Spanish Sub-Test III than in the comparable English test. Second, non-linguistic factors very likely affected these scores more than in the case of the English speakers. Sub-Test IV probably involved the factors of memory and reasoning ability. Third, the type of Spanish utilized on the tests was probably not in all instances the dialect of the pupils. As mentioned previously in Chapter III, after the tests were administered, the bilingual teachers who gave the tests became aware of certain inconsistencies in dialect. It is very likely that this third factor was responsible for the differences in means scores between the English and Spanish-speakers on their respective native-language tests. This third factor raises an almost insoluble problem for one who prepares a standardized test of Texas Border Spanish. The dialect of Spanish of South Texas has not been adequately investigated and documented. One simply does not know enough about it to prepare a test in it comparable to English. Also, there is less uniformity in Texas Border Spanish from individual to individual and from community to community because of sociological factors. In comparison with English, for example, it does not have the status of being a prestigious, standard language.

Therefore, one cannot expect to find uniformity in it. One cannot prepare a completely adequate test of Texas Border Spanish until there is accurate knowledge of this dialect of Spanish available - knowledge, that is, which is based on careful and intensive dialect survey. Until then, the test-maker must, as in this project, rely on intuitive judgment -- his and on that of native-speakers of the dialect -- in preparing and selecting items for a test.

A detailed analysis of the content validity of English and Spanish test can be made by examining native-speaker performance item by item on each sub-test.

Performance of Native English-Speakers on English Competence Series Item by Item

Sub-Test I

Twelve subjects achieved a percentage mean of 100% on all items of Sub-Test I except the following:

Item Number	Percentage Mean	Item
[illegible]	92	"Is sugar sweet or sour?"
13	83	"Ask me if I've got a pen?"
14	92	"How many days are there in a week?"
21	92	"Doesn't a rabbit have long ears?"
23	75	"Does Christmas come in September?"
24	92	"What day comes after Friday

Three items that were missed by some children, i.e. Items No. 14, 23 and 24, involve abstract notions of time. It would seem that such items are not appropriate language testing items for this age of pupil. Three other items have in common a certain unusualness or over-obviousness which might have confused children. One simply does not have much occasion to say to a child, for example, "Is sugar sweet or sour?" or "Ask me if I've got a pen?" The wrong responses to "Is sugar sweet or sour?" might, however, suggest a tendency often noted among three and four year old children, that is, when such a child is asked an alternative question he invariably answers by selecting the latter alternative posed in such a question. There is evidence that children acquire a simple yes-no type question before they learn the alternative question pattern. Thus such children respond to alternative questions as if they were yes-no questions.

Sub-Test II

All subjects achieved a mean score of 100% on all items except No. 8, "Show me the palm of your hand," which had a mean of 58% correct. It is likely that the word "palm" or the phrase "palm of your hand" would not be known by all children of this age level. Consequently No. 8 is not a fair item. "Show me" is certainly known since it occurred in three other items which were not missed.

Sub-Test III

Fourteen items received less than a mean score of 100% on Sub-Test III. These items were:

Number	Percentage Mean	Same or Different Response	Item
4	83	S(Same)	"A razor. A razor"
7	92	S	"The washing. The washing."
8	83	D(Different)	"The ice. The eyes."
9	92	D	"The mouse. The mouth."
10	92	D	"The dishes. The ditches."
12	83	S	"A job. A job."
15	75	D	"Pull. Pool."
16	75	S	"The wing. The wing."
17	92	D	"The bridges. The breeches."
18	92	D	"A sheep. A ship."
22	83	D	"Grade. Great."
25	92	S	"Ten. Ten."
28	92	D	"Thinking. Sinking."
29	83	D	"The ship. The chip."

Five items of those missed called for a "same" response. The misses on these items result from a weakness inherent in a minimal pair test of sound discrimination for children. Even though they invariably make the proper phonemic distinctions in using their native language, learning to recognize such distinctions on a test is another matter. They either "hear" phonemic differences that are not there or they respond to sub-phonemic differences or free variations in the tester's pronunciation of the two words or phrases. Nine items were missed which called for a "different" response. The most common wrong responses in this instance involved a distinction of /s/ vs. /θ/, /š/ vs. /č/, and /I/ vs. /iy/, with two items each. Three items involved distinctions of /s/ and /z/, /ǰ/ and /č/ and /d/ vs. /t/ in final position. Except for the errors with the /t/ vs. /d/ and vowel contrasts, all wrong response involved fricative sounds. One suspects -- and this is often corroborated by other investigators and even in other languages -- that such sounds are more inherently difficult and the last to be learned by children learning their native language.

It seems likely that non-linguistic factors are responsible for many errors made by children on this test, and not linguistic competence. Very likely the defect in the instructions for marking given the children (See Chapter III) caused confusion and consequently some variance in the scores. The remaining variance most likely resulted from the nature of the test, i.e., it required too much language consciousness.

Sub-Test IV

Only on three items of Sub-Test IV did the 12 subjects achieve a mean score of 100%. The items missed were as follows:

Number	Percentage Mean	Correct or Incorrect Sentence	Type of Grammatical Error
3	75	Incorrect	Adjective noun order, adjectival inflection
4	92	Correct	
5	75	Incorrect	Comparative
6	83	Incorrect	Article
7	59	Incorrect	Expletive "there"
8	83	Incorrect	Article

Number	Percentage Mean	Correct or Incorrect Sentence	Type of Grammatical Error
9	42	Incorrect	Verb form
10	92	Correct	
11	75	Incorrect	Question word-order
13	92	Incorrect	Word Order
14	92	Correct	
15	83	Correct	
16	42	Incorrect	Preposition
17	83	Correct	
18	83	Correct	
19	67	Incorrect	Article vs. possessive adjective
20	92	Correct	
21	83	Correct	"Do" in question
22	92	Correct	
23	83	Incorrect	Idiom
24	75	Correct	
25	58	Correct	
26	92	Incorrect	Verb form
27	92	Correct	
28	75	Incorrect	Noun form
29	58	Incorrect	Article
30	75	Correct	

Thirteen of the items missed by some children were grammatically correct but were responded to as "wrong." Fourteen of the items missed by some children were grammatically incorrect but were responded to as "right." The greater number of items partially missed and the lower mean scores per item indicate this test is a poor one. Very likely the test is defective because it makes demands with respect to language consciousness which children have only inadequately developed. Therefore, it is not primarily a test of linguistic competence. A great variety of grammatical errors were passed over by the subjects and marked as "correct." Very likely the marking instructions are partly responsible for pupils' variable performance. Fifty percent of the subjects missed Item No. 7, "Is a library in our school?" This item is defective because it can be read (as intended) with statement intonation (in which case the sentence is grammatically incorrect) or with question intonation (in which case the sentence is grammatically correct). Probably the testers varied in the intonation given to this item. The most frequent wrong responses involved verb forms (Item No. 9 with 42% correct), prepositional usage (No. 16, 42% correct) and articles (No. 19, 67% correct; No. 29, 58% correct).

Sub-Test V

Of the 24 items (or of 63 words) on this sub-test on only five was the mean less than 100%. These were:

Item Number	Correct Choice	Percentage Mean Correct	Other Choices
2	comb	92	8% unmarked
	box	92	8% unmarked
15	cup	92	8% unmarked
	knife	92	8% unmarked
20	waitress	92	8% teacher
	secretary	83	8% student (female) 8% housewife
21	carpenter	75	17% student (male) 8% priest
24	worm	92	8% snail
	fly	92	8% ant
	spider	92	8% butterfly

Close inspection of Items 20 and 21, which had the lowest mean scores, reveals a pictorial defect. The distinctions between "waitress" and "housewife" and between "secretary" and "student (female)" are not clearly made on the child's answer sheet. Also, the pictures for "carpenter", "priest," and "student (male)" are not entirely obvious.

Sub-Test VI

All items on Sub-Test VI received a mean of 100% with the exception of the following:

Item Number	Percentage Mean Correct	Correct Choice	Other Choices
2	92	fork	8% dish
3	92	mirror	8% picture
4	75	wind	25% rain
6	92	sheep	8% duck
18	17	river	75% ocean 8% mountain
19	67	cloud	33% rainbow

This sub-test probably more than any other measured non-linguistic factors. This sub-test required the child to listen to a riddle, then listen to the three words spoken by the tester, which corresponded to the three pictures on the child's answer sheet, and then to respond by marking the picture which solved or answered the riddle. The attempt was to make these items patently obvious so that their solution involved only a knowledge of the language employed in the item. Judging from the test results, it seems that the attempt was not entirely successful. It is likely that in responding to such a task that the non-linguistic factors of memory, intelligence, and pictographic interpretation were involved. Item No. 18, however, is clearly defective because of the pictures used. The pictorial distinction between "ocean" and "river" are not obvious. Moreover, the picture of ocean employs an abstract and conventional symbol to represent "water" and not specifically "ocean". Items

No. 4 and 19 are also defective, but to a much lesser extent, for the same reason. The pictorial distinctions between "cloud" and "rainbow" and "cloud" and "wind" are not clear.

Performance of Native Spanish-Speakers on Spanish Competence Series Item by Item

Sub-Test I

Fifty subjects achieved a mean percentage correct of 100% on Items No. 4, 8, 9, 15, and 18. Mean scores on items partially missed were as follows:

Number of Item	Percentage Mean	Item
1	94	"¿Quién es tu mejor amigo (o amiga) en la escula?
2	98	"¿Eres tú un niño (niña)?"
3	92	"¿Es dulce o agrió el azúcar?"
5	98	"Cuenta hasta cinco para mí."
6	96	"¿Es ésta la nariz?"
7	94	"¿Dónde te gusta jugar?"
10	84	"Dime qué son dos y dos."
11	98	"Les gusta a las niñas jugar con muñecas, ¿no es verdad?"
12	84	"¿Tienes tu _____años?"
13	58	"Pregúntame si yo tengo una pluma."
14	50	"¿Cuántos días hay en la semana?"
16	92	"¿Es una lápiz hecho de madera o papel?"
17	80	"¿Es hoy el __________?"
19	80	"¿Es un tren más largo que un camión?"
20	76	"Dime mirar a mi reloj."
21	96	"Un conejo tiene orejas largas, ¿verdad?"
22	98	"¿Te gustaría tomar la leche o el agua?"
23	30	"¿Viene la navidad en septiembre?"
24	58	"¿Cuál día sigue el viernes?"
25	76	"Dime qué tú estás haciendo ahora mismo."

It is significant that of the four items most subjects missed -- Items No. 13, 14, 23 and 24 -- were the same ones that were most frequently missed in English by the English-speaking children. Three of these involve abstract notions of time. This is convincing confirmation that these four items are unfair for children of this age level. Such children can not be expected to have mastered the abstract notions of time involved in these items. Item No. 13 in Spanish is defective perhaps for the same reason that it is in English, namely, it is simply unusual and too obvious. Three items, No. 20, 24 and 25, involve language defects. No. 20 as it occurs in the original test is ungrammatical. It should be "Dime que mire a mi reloj." No. 24 should be worded, "¿Cúal día se sigue el viernes?" No. 26, "Dime qué estás haciendo tú ahorita mismo." In the original version of the test item, "tú" occurs in the wrong sentence-position and "ahora mismo" in Texas Border Spanish does not consistently refer to the immediate present, as was called for by the instructions for scoring. Other instances of infelicitous wording and choice of words in Spanish were probably responsible for other less than perfect scores. Some of these defects have been remedied on the version of the sub-test presented in Appendix A. Less than near-perfect scores were obtained on Items No. 10, 12, 17, and 19, which involved concepts of time, number, age, and size. Perhaps these lower scores reflect cultural differences of the Spanish-speaking children in comparison with their English-speaking peers. These four items were probably less fair for the Spanish-speaking children because Latin culture does not emphasize such quantitative skills to the extent that Anglo culture does and thus Spanish-speaking children cannot be expected to possess these skills on a par with their English-speaking peers.

Sub-Test II

Fifty subjects obtained a mean percentage of 100% on Items No. 1, 2, 9, 13, and 17. Less than 100% was achieved on the following items:

Item Number	Percentage Mean	Item
3	98	
4	78	"Cúbrete las orejas con las manos."
5	98	
6	96	
7	96	
8	24	"Muéstrame la palma de la mano."
10	96	
11	94	
12	96	
14	78	"Enséñame el codo."
15	96	
16	88	"Levanta la mano izquierda."
18	98	
19	44	"Haz una seña de despedida con la mano a alguien allá."
20	92	
21	96	
22	96	
23	94	
24	98	
25	94	

Items No. 8 and 19 are severely defective. No. 8 is defective for the same reason that the comparable English item was defective, that is, "palm" or "palm of the hand" is not in the experiential and linguistic range of the seven-year-old child. No. 19 is defective linguistically; it is a cumbersome attempt to translate the English item. Probably a more acceptable wording would be, "Dile adiós con la mano a alguien."

Sub-Test III

No items on Sub-Test III received a mean score of 100%. The following mean scores were obtained by fifty subjects:

Item Number	Percentage Mean	Same or Different	Item
1	92	D	"La brisa. La prisa."
2	88	S	"El camino. El camino."
3	70	D	"Dos. Tos."
4	84	D	"Calor. Color."
5	84	S	"Valle. Valle."
6	90	D	"Pena. Peina."
7	80	D	"La coma. La goma."
8	86	S	"Un rato. Un rato."
9	92	D	"Peña. Pena."
10	80	D	"Todo. Toro."
11	94	D	"Alumnas. Alumnos."
12	90	S	"Campaña. Campaña."
13	90	D	"El cuerpo. El cuervo."
14	82	D	"Perro. Pero."
15	72	S	"El huero. El huero."
16	52	D	"El favor. El pavor."
17	76	S	"La cara. La cara."
18	54	D	"Los hombres. Los hombres."
19	86	D	"Papas. Papás."
20	84	S	"Un vaso. Un vaso."
21	82	D	"Peces, Veces,"
22	80	D	"Huero. Mero."
23	84	D	"Niños. Niñas."
24	90	S	"Los toros. Los toros."
25	90	D	"Un hueso. Un beso."
26	90	S	"La mesa. La mesa."
27	84	S	"Toro. Toro."
28	86	D	"Ruido. Rudo."
29	90	D	"Tenso. Denso."
30	92	S	"Los planes. Los planes."

The content validity of Sub-Test III is considerable less than the comparable English test. No individual item can be singled out as excessively defective on the basis of these results except No. 16. and 18. The test as a whole is somewhat lacking in validity. Doubtlessly this testing technique is a weak one. The low mean scores are probably due, as stated previously, to the fact that the minimal pairs utilized on the Spanish test contained words of low frequency of occurrence and thus the Spanish-speaking children were not familiar with them.

Sub-Test IV

Item Number	Percentage Mean	Correct or Incorrect	Grammatical Error
1	90	Incorrect	Ser vs. estar
2	86	Correct	
3	88	Incorrect	Adjective inflection
4	82	Correct	
5	44	Incorrect	Verb form
6	70	Correct	
7	60	Correct	
8	40	Incorrect	"a" before direct personal object
9	46	Incorrect	Idiom
10	82	Correct	
11	48	Correct	
12	52	Incorrect	"a" inserted after verb
13	44	Correct	
14	82	Correct	
15	82	Incorrect	Verb form
16	58	Incorrect	Reflexive verb form
17	60	Incorrect	Verb form
18	62	Correct	
19	90	Incorrect	Word order
20	70	Incorrect	Idiom

Sub-Test IV (Continued)

Item Number	Percentage Mean	Correct or Incorrect	Grammatical Error
21	68	Correct	
22	70	Incorrect	Ser vs. estar
23	80	Correct	
24	62	Incorrect	Idiom
25	84	Incorrect	Verb form
26	76	Correct	
27	34	Incorrect	Ser vs. estar
28	78	Correct	
29	62	Incorrect	Article
30	86	Correct	

The items missed were about equally divided between "wrong" responses to sentences which were correct and "right" responses to sentences which were incorrect. This Sub-test is a poor measure of linguistic competence, and results obtained with this instrument must be used with caution. Probably this Sub-test measures language consciousness more than anything else. Very likely the marking instructions are partially responsible for pupils' low and variable scores.

Sub-Test V

Of the 24 items (or 63 words) in this Sub-test, on five items was the mean score 100%. The items partially missed by subjects were:

Item Number	Word	Percentage Mean Correct	Other Choices
2	caja	96	2 teléfono
	peine	98	2 silla
			2 cepillo
7	regla	90	12 cámara
	sobre	98	
8	hoja	98	4 libro
9	serrucho	98	2 pan

Sub-Test V (Continued)

Item Number	Word	Percentage Mean Correct	Other Choices
10	cedrón	84	6 huile
			8 árbol
11	escritorio	92	8 cordón
12	pala	96	2 unmarked
13			2 unmarked
14	leña	96	2 bolsillo
			2 hoja
15	taza	96	2 caja
			4 vaso
16	teléfono	98	2 tijeras
17	manzana	98	2 helado
	carne	98	2 pastel
	huevo	98	2 plátano
18	desarmador	98	2 cepillo
			2 cedrón
19			4 aeroplano
20	enfermera	98	18 maestra
	secretaria	82	26 estudiante
	mesera	58	6 ama de casa
21	carpintero	86	2 estudiante
	policía	98	4 padre
			4 cartero
22	pollo	98	
	oso	98	2 oveja
23	conejo	98	2 unmarked
24	mosca	94	2 hormiga
	gusano	78	4 mariposa
	araña	96	24 caracol

The low mean score of Item 20 suggests a defect. This corroborates the findings regarding the comparable item in English. Here again the less than near-perfect mean score is primarily due to the fact that the pictorial distinction between "mesera" and "ama de casa" and between "secretaria" and "estudiante" are not clearly made on the child's answer sheet. The less than near-perfect score for Item 10 probably reflects an infelicitious choice of words. Perhaps the word "cubeta" rather than "cedròn" should be used for bucket. It seems, though, that there is no perfectly appropriate term in Spanish corresponding to the English words bucket and pail. The low score for "gusano" in Item No. 24 probably reflects a pictorial confusion or simply a vocabulary deficit. It could also reflect a cultural difference: Latin Americans are simply less preoccupied with these small crawling insects than the Anglo.

Sub-Test VI

All items on Sub-Test VI received a mean score of less than 100%.

Item Number	Percentage Mean	Choice	Other Choices	
1	66	sol	34 luna	
2	62	tenedor	34 plato	4 servilleta
3	96	espejo	4 taza	
4	54	viento	34 lluvia	12 sol
5	90	corbata	10 sombrero	
6	76	oveja	4 perro	20 pato
7	90	tijeras	4 pluma	6 cuchillo
8	90	regla	10 lápiz	
9	98	lámpara	2 campana	
10	72	hojas	20 flores	8 ramos
11	90	bicicleta	2 carro	8 triciclеta
12	88	carpintero	2 policía	8 granero
13	82	pizarrón	12 cuaderno	4 escritorio
14	96	avión	2 tren	2 nube
15	98	payaso	2 leon	
16	82	mariposa	12 hormiga	6 gorrioncillo
17	98	llave	2 cuchillo	
18	22	rio	80 océano	
19	66	nube	6 sol	28 arco iris
20	98	delantal	2 sombrero	

As indicated in connection with the comparable English test, Sub-Test VI probably measures the non-linguistic factors of intelligence, memory, and pictographic interpretation to a considerable extent. Items 4, 18, and 19 are defective for pictorial reasons. Item No. 18 is seriously defective.

Summary

The preceding has been an attempt to establish the content validity of the English Competence Series and the Spanish Competence Series by examining item by item native-speaker performance. To the extent that scores on the various sub-tests approach near-perfect ones, one can conclude, to such a degree are the various sub-tests valid with respect to content. We have seen that the over-all validity of the Spanish tests is not as satisfactory as that of the English tests. We have also seen that individual Sub-Test No. IV in each series is a poor measure of linguistic competence (but particularly in Spanish). Sub-tests III and VI are less than satisfactory (particularly the Spanish ones) but perhaps adequate. The remaining sub-tests in both series are satisfactory.

Reliability

The content validity of the two language series has been ascertained by examining the performance of native-speaking children on each series. An additional task is to determine the reliability of each series by examining second-language learners' performance on each series.

English Series: Spanish-Speaker Performance

Eighty-five Spanish-speaking children were given the English Series. The over-all results they achieved are as follows:

Sub-Test	Items	Mean Scores	SD	IC
I	25	20.8235	2.9473	.7319
II	25	21.6353	2.9058	1.0
III	30	22.2118	4.7826	1.0
IV	30	18.6706	4.0826	1.0
V	63	58.1412	4.6226	.8348
VI	20	16.5059	3.0433	.7878

Interpreting and judging the entire series in the light of principles employed in conventional testing, the mean scores are too high and the SDs too small for the English Competence Series as a second-language test to have good range or discriminatory power. However, the mean scores and the SDs might simply reflect that the children tested knew English fairly well and fairly consistently. Such is likely to be the case since they all had been studying primarily in English in school for at least a year.

Spanish Competence Series: English-Speaker Performance

Seven native English-speakers were given the Spanish Competence Series, consequently, results must here be interpreted with caution. The sample population is simply too small.

Sub-Test	Items	Mean Scores	SD	IC
I	25	12.8571	3.9745	.7839
II	25	10	4.6599	1.0
III	30	26.7143	2.6030	1.0
IV	30	20.36	3.6974	1.0
V	63	44.8571	7.6612	.8501
VI	20	16.2857	2.1853	.5758

A number of unusual things occur in these data. The mean scores are low for Sub-Test V and particularly for Sub-Tests I and II. These scores probably reflect the fact that the English-speakers do not know Spanish very well. Such is likely to be the case because of the nature of the experimental program that these children were involved in. The program was a new one, in operation less than one year. Moreover, all teachers in the program had had considerable experience in teaching English to Spanish-speaking children but not Spanish to English-speaking children. Also, because there were so few English-speaking children in the program -- only about 25 -- it is likely that no considerable effor was made to teach Spanish to the English-speaking children, not at least, an effort comparable to that given to teaching the Spanish-speaking children English. What is unusual about these scores is the relatively high scores achieved in Sub-Tests III, IV, and VI. The scores here are inconsistent with the scores on the other three sub-tests. One suspects that the two sets of sub-tests I, II, and V on the one hand, and III, IV, and VI on the other, are not measuring the same thing. Subjects scored even higher on Sub-Test III than the native Spanish-speaking subjects. This tends to confirm the conclusion that Sub-Test III, IV, and VI are lacking in content validity, and that they perhaps do not measure linguistic competence but some non-linguistic factor or factors.

The reliability of the two language series can be analyzed in detail by examining the item by item performance of second-language learners on each series. In ascertaining the reliability of each item two statistical devices can be employed: the mean score of each item and the point by serial correlation of each item with the total subtest score. Items that were found previously to be lacking in content validity are marked with an asterisk (*). One can in some instances anticipate that such items will be lacking in reliability as well. It must be kept in mind, however, that the content validity of the English Series was determined on the basis of the performance of twelve subjects.

Item By Item Analysis

English Competence Series: Spanish-Speaker Performance

Sub-Test I

Percentile Mean Scores	Items in Percentile
100	11, 15
99 - 90	2, 4, 5, 6, 8, 18, 21*, 22
89 - 80	1, 7, 9, 10, 12, 17, 19, 25
79 - 70	16, 20
69 - 60	13*, 14*
59 - 50	24*
49 - 40	3*
39 - 30	23*

Correlation Ranges	Items
.69 - .60	20
.59 - .50	1, 4, 7, 13*, 14*
.49 - .40	3*, 25
.39 - .30	2, 5, 6, 10, 12, 16, 23*, 24*
.29 - .20	8, 9, 19, 21
.19 - .10	17
.09 -0.	11, 15, 18, 22

On the basis of mean scores one can conclude that Items No. 2, 4, 5, 6, 8, 11, 15, 18, 21, and 22 are too easy and have little discriminatory power and that Items No. 3, 13, 14, 23, and 24 are defective or too difficult and thus also have little discriminatory power. On the basis of item by serial correlations with total sub-test score, one can conclude that Items No. 8, 9, 11, 15, 17, 18, 21, and 22 contribute little to the discriminatory power of the sub-test. The items in English Sub-Test I which are particularly weak or defective and in need of revision are: No. 3, 11, 15, 17, 18, 22, 23, and 24.

Sub-Test II

Percentile Mean Scores	Items
100	1, 12
99 - 90	2, 3, 5, 7, 10, 11, 17, 20, 21, 22, 23, 24
89 - 80	4, 6, 9, 15, 19
79 - 70	16, 18, 25
69 - 60	14
...	
19 - 10	8*

Correlation Ranges	Items
.79 - .70	15
.69 - .60	25
.59 - .50	3, 9, 11, 14, 17
.49 - .40	4, 5, 6, 7, 10, 13, 16, 18
.39 - .30	19, 22
.29 - .20	21, 24
.19 - .10	8*, 23
.09 - .0	1, 2, 12
.0 - -.09	20

Items 1, 2, 3, 5, 7, 10, 11, 12, 13, 17, 20, 21, 22, 23, 24 are too easy and Item 8 is too difficult or defective and consequently have little or no discriminatory power. Items 1, 2, 8, 12, 20, and 23 contribute little to the total sub-test score. Items which are particularly weak and in need of revision are No. 1, 2, 8, 12, 20, and 23.

Sub-Test III

Percentile Mean Scores	Items
89 - 80	1, 2, 5, 6, 7, 9, 13, 14, 16*, 19, 21*, 22, 25, 27, 28, 29*
79 - 70	4*, 11, 12*, 15*, 18, 23
69 - 60	3, 17, 26
59 - 50	8*, 24, 30
49 - 40	10, 20

Correlation Ranges	Items
.59 - .50	12
.49 - .40	2, 5, 6, 11, 13, 14, 18, 19, 21*, 22, 23, 26
.39 - .30	2, 7, 10, 15*, 16*, 17, 20, 24, 25, 27, 29, 30
.29 - .20	1, 4*, 8*, 9
.19 - .10	29*

Since the content validity of Sub-Test III is less clearly established, it follows that a revision of items should rest equally or perhaps more strongly on the reliability of items. No items in this sub-test proved to be too easy. Items 8, 10, 20, 24, and 30 appear somewhat difficult. Items 1, 4, 8, 9, and 29 appear to contribute little to the total sub-score. Items which are particularly weak or defective and in need of revision are No. 4, 8, 10, 20 and 29.

Sub-Test IV

Percentile Mean Scores	Items
89 - 80	1, 4, 15, 22
79 - 70	10, 12, 18
69 - 60	2, 3, 5, 6, 8, 13, 14, 17, 20, 24, 27, 30
59 - 50	11, 16*, 21, 23, 28
49 - 40	9*, 19*, 25*, 26
39 - 30	7*, 29*

Correlation Ranges	Items
.59 - .50	3, 13, 14
.49 - .40	1, 2, 10, 18, 21
.39 - .30	4, 5, 7*, 11, 19*, 22, 29*, 30
.29 - .20	8, 12, 20, 23, 26
.19 - .10	6, 9*, 16*, 17, 25*, 27, 28
.09 - .0	15
.0 - -.09	24

Items 7, 9, 19, 25, 26, and 29 appear too difficult. Items 6, 9, 15, 16, 17, 24, 25, 27, and 28 appear to contribute little to the total sub-score. Items which are particularly weak or defective and in need of revision are No. 7, 9, 15, 19, 24, 25, 26, and 29.

Sub-Test V

Percentile Mean Score	Items[1]
100	3, 12, 21, 25, 26, 28, 33, 39, 55
99 - 95	1, 2, 7, 11, 13, 15, 16, 19, 23, 24, 29, 30, 32, 37, 40, 41, 46, 47, 48, 52, 54, 56, 57, 58, 59, 60
94 - 90	5, 6, 8, 9, 10, 18, 31, 34, 35, 38, 42, 49
89 - 85	4, 17, 22, 27, 36, 43, 45, 63
84 - 80	20
79 - 75	50, 44
74 - 70	53
69 - 65	62
64 - 60	61
59 - 55	14
54 - 50	51*

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[1] The numbers here refer to the words given as stimuli on the Oral Vocabulary Sub-Test and in the order in which they appear on the answer sheets and not as they are listed on the test.

Correlation Ranges	Items[2]
.79 - .70	9
.69 - .60	-
.59 - .60	1, 6, 10, 17, 32, 37, 40, 42
.49 - .40	5, 8, 11, 13, 15, 16, 18, 20, 22, 24, 27, 31, 35, 36, 38, 43, 49, 54, 56, 57, 58, 61
.39 - .30	4, 7, 14, 30, 44, 48, 52*
.29 - .20	29, 47, 53, 62, 63
.19 - .10	2, 34, 41, 45, 50
.09 - .0	3, 12, 19, 21, 23, 25, 26, 28, 33, 39, 55, 59, 60
.0 - -.09	46, 51*

Items No. 3, 12, 21, 25, 26, 28, 33, 39, 55 are too easy and items No. 14 and 51 are too difficult and thus have little or no discriminatory power. Items No. 2, 3, 12, 19, 21, 23, 25, 26, 28, 33, 34, 39, 41, 45, 46, 50, 51, 55, 59, and 60 contribute little or nothing to the total sub-score. All of the items mentioned here are in need of revision.

Sub-Test VI

Percentile Mean Scores	Items
98 - 90	3, 7, 9, 13, 14, 15, 17, 20
89 - 80	1, 5, 8, 10, 11, 12, 16
79 - 70	-
69 - 60	2, 4*, 6, 19*
59 - 50	-
49 - 40	-
39 - 30	18*

Correlations Ranges	Items
.69 - .60	8, 20
.59 - .50	3, 12, 13, 14, 15, 16
.49 - .40	2, 4*, 6, 10, 11, 17, 19*
.39 - .30	1, 5, 7, 9, 18*

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[2] See previous footnote

Items No. 3, 7, 9, 13, 14, 15, 17, and 20 are too easy and have little or no discriminatory power. Item No. 18 is clearly defective. Items No. 1, 5, 7, 9, and 18 contribute least to the total sub-score. Items which are in need of revision are No. 4, 18, and 19.

Spanish Competence Series: English-Speaker Performance

Since only seven native English-speaking subjects were given the Spanish Series, the correlation of individual items with total sub-score is not very meaningful; therefore, only mean scores will be used to ascertain the reliability of the Spanish Series as a second-language test.

Sub-Test I

Percentile Mean	Items
100	5, 10
99 - 90	-
89 - 80	2, 15, 18, 21, 22
79 - 70	4, 6, 8
69 - 60	-
59 - 50	11
49 - 40	3, 9, 12, 14*, 17, 19
39 - 30	-
29 - 20	16, 23*, 24*
19 - 10	1, 13*, 20
9 - 0	7, 25*

Items No. 5 and 10 appear to be too easy and thus have little discriminatory power or range. Items 1, 3, 7, 9, 12, 13, 14, 16, 17, 19, 20, 23, 24, and 25 appear too difficult. One hesitates to suggest revisions from the basis of such a small sample, however, it would appear that Items No. 1, 5, 7, 10, 13, 14, 16, 23, 24, and 25 might be revised.

Sub-Test II

Percentile Mean	Items
89 - 80	22, 23
79 - 70	2, 3, 5
69 - 60	-
59 - 50	1, 4, 9, 13, 21
49 - 40	16
39 - 30	-
29 - 20	10, 11, 12, 15, 17, 24, 25
19 - 10	6, 7, 8*, 14, 18, 20
9 - 0	19*

Revisions are suggested for Items No. 8 and 19.

Sub-Test III

Percentile Mean	Items
100	6, 11, 12, 13, 22, 23, 25, 26, 27, 28, 29, 30
99 - 90	-
89 - 80	1, 2, 3, 4, 7, 9, 10, 14, 15, 17, 18*, 19, 20, 24
79 - 70	5, 8, 16*
69 - 60	-
59 - 20	21

Items No. 6, 11, 12, 13, 22, 23, 25, 26, 27, 28, 29, 30 appear to be too easy and consequently have little or no discriminatory power. The sub-test as a whole would seem to correlate very poorly with the other sub-tests. It is highly likely that in this instance the test is not measuring second-language competence but purely phonetic discrimination ability.

Sub-Test IV

Percentile Mean	Items
89 - 80	1
79 - 70	20, 22, 23, 26
69 - 60	-
59 - 50	2, 3, 7*, 10, 14, 15, 16*, 18*, 21*, 25, 29*
49 - 40	4, 6, 8*, 9*, 11*, 12*, 13*, 17*, 19, 27*, 30
39 - 30	-
29 - 20	5*, 24*, 28

Items No. 4, 5, 6, 8, 9, 11, 12, 13, 17, 19, 24, 27, 28, and 30 appear to be too difficult and thus have little or no discriminatory power. Revisions are suggested for Items No. 5, 8, 9, 11, 12, 13, 17, 24, 27, and 28.

Sub-Test V

Percentile Mean	Items[3]
100	13, 16, 30, 39, 41, 49, 52, 53, 54, 56, 57, 58, 59, 60
99 - 90	-
89 - 80	11, 15, 20, 31, 32, 33, 46, 51*, 55, 60, 63
79 - 70	2, 6, 9, 14, 17, 19, 21, 22, 23, 24, 25, 26, 28, 34, 36, 43, 45, 50*
69 - 60	-
59 - 50	1, 3, 4, 8, 12, 18, 37, 40, 42, 47
49 - 40	5, 7, 38, 44, 48
39, 30	-
29 - 20	29, 62*
19 - 10	10*, 27, 35

Items No. 13, 16, 30, 39, 41, 49, 52, 53, 54, 56, 57, 58, 59, and 60 appear to be too easy and have little or no range. Items No. 10, 27, 29, 35, and 62 appear to be too difficult. All items mentioned here are suggested for revision.

Sub-Test VI

Percentile Range	Items
100	2*, 3, 10, 11, 13, 15, 16
99 - 90	-
89 - 80	1*, 4*, 7, 8, 17, 20
79 - 70	5, 6, 9*, 14
69 - 60	-
59 - 50	12, 19*
49 - 40	-
39 - 3	-
29 - 20	-
19 - 10	18*

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[3] See previous footnotes

Items No. 2, 3, 10, 11, 13, 15, 16 appear to be too easy and thus have no discriminatory power. However, the high scores on these items might be a result of contamination of the English Series since this group of subjects took the English tests before the Spanish Series. Sub-Test VI in Spanish is equivalent or comparable with respect to content (the same answer sheet was used in both cases) and subjects may have remembered their correct choices on the English test. This could not be the case with Sub-Test III and IV since different items of pronunciation and grammar had necessarily to be used.

Code Switching

One special problem faced by the bilingual child or the partially bilingual child, since he does know equally well the two linguistic codes or languages, is the use of the appropriate code and appropriate code-switching. Sub-Test I in both English and Spanish, which were administered individually, enabled one to take some account of code-switching, specifically, the testers recorded responses which were correct or appropriate responses to items but which were not in the language of the test. The code-switching data can be presented as percentage means on each test for the two types of subjects in two situations.

Native Language of Subjects	Language Series Given	Percentage Mean	Items Switched
English	Spanish	1.7%	7, 15, 25
Spanish	Spanish	.2%	7, 25
English	English	.0%	
Spanish	English	.2%	1, 4, 7, 20, 24

The results indicate there was surprisingly little code-switching. As could be anticipated children switched codes inappropriately more when using a second language than when using a first language. This is to be expected since children are more sure of their first language. In a second language, the English-speaking children switched considerably more than the Spanish-speaking children. However, the Spanish-speaking children switched codes when they were addressed in their native language; the English-speakers did not. One can probably assume that this is the case because of the more prestigious status of English in the community.

Inventory of Socialization

Here an attempt is made to ascertain the validity and reliability of the three instruments encompassed by the *Inventory of Socialization*, utilizing mean scores or ratings, standard deviations, and indices of internal consistency or correlation.

Personal-Social Responsiveness Interview

The *Interview* was probably more a language test than a measure of socialization. Many of the responses called for on the instrument were linguistic responses; other responses were non-linguistic ones elicited by linguistic stimuli. The tester was instructed to give the interview in the native language of the child or in the language (in the judgment of the tester) that the child could best control. However, the interview did provide an experiential basis or contact with the child on which the tester could apply the second instrument of this Inventory, the Rating of Child's Behavior and Responsiveness. It would seem that this interview can be eliminated and Sub-Test I and II be used in its place as a means of providing the rater with an interpersonal experience with the child. Many of the items on Sub-Tests I and II were, in fact, duplicated in the Interview.

Ninety-seven subjects were given the Personal-Social Responsiveness Interview in either English or Spanish. The combined results of the English and Spanish interviews were:

Number of items	40
Mean Score	35.5876
Standard Deviation	3.3050
Correlation	.7437

Percentile Mean Ranges	Items
100	1, 6, 7, 8, 9, 18, 19, 23
99 - 90	2, 4, 7, 10, 13, 14, 15, 16, 17, 20, 21, 22, 24, 25, 29, 32, 33, 36, 37, 38, 39, 40
89 - 80	26, 27, 30, 31, 35
79 - 70	12
69 - 60	34
59 - 50	3, 38
49 - 40	5, 11

There is some question whether to interpret these results as a native-language test (in which case one would expect near-perfect scores) or as a conventional abilities test (in which case one would expect variable scores). The original intention was that it would serve both purposes. In retrospect this intention now seems confused and ambiguous. From the results above it would seem that the _Interview_ is more a native-language competence test and that native-speaking children respond appropriately to all tasks called for with near-perfect accuracy. Thus, regarding the _Interview_ as a native language test, it would seem that it could be improved by revising Items No. 3, 5, 11, 28, and 34.

Thirty-two subjects were given the _Interview_ in English. The results they obtained were:

Number of Items	40
Mean Score	36.9687
Standard Deviation	2.6159
Correlation	.6964

Percentile Mean Ranges	Items
100	1, 2, 4, 6, 8, 9, 10, 13, 14, 15, 18, 19, 23, 27, 32, 38
99 - 90	7, 11, 16, 17, 20, 22, 26, 29, 30, 31, 33, 35, 36, 39, 40
89 - 80	12, 21, 24, 25, 37
79 - 70	3, 5, 34
69 - 60	-
59 - 50	-
49 - 40	-
39 - 30	28

As a native language test, Item No. 28 of the English version would need revision. Sixty-five subjects were given the Interview in Spanish. The results they obtained were:

Number of Items	40
Mean Score	34.9077
Standard Deviation	3.3956
Correlation	.7589

Percentile Mean Ranges	Items
100	1, 6, 7, 8, 9, 18, 19, 23, 24, 25
99 - 90	2, 4, 10, 13, 14, 15, 17, 20, 21, 29, 32, 33, 36, 37, 38, 39, 40
89 - 80	16, 22, 26, 30, 31, 35
79 - 70	27
69 - 60	12, 28
59 - 50	34
49 - 40	3
39 - 30	5
29 - 20	11

The mean scores in Spanish per item is generally somewhat lower than in English. Items No. 3, 5, 11, 12, 28, and 34 seem too difficult or defective, and thus need revision. Since No. 28 was a difficult item in both English and Spanish one suspects that it is inappropriate for reasons of content.

Provision was made on this instrument for recording inappropriate use of linguistic code or code-switching. Thirty-two subjects tested in English in no instance used an inappropriate code, i.e. none responded to an item correctly but in the wrong language (not the language of the test). The mean percentage score of code-switching for the sixty-seven Spanish-speakers taking the Interview in Spanish was 2.38%.

Rating of Child's Behavior and Responsiveness

Ninety-seven subjects were rated during the Interview on this instrument by eight teachers. The rating scale utilized was: 1 = Very Much (was this particular pattern observed to occur), 2 = Somewhat, 3 = Very Little, and 4 = Not at All. The overall results obtained can be summarized as follows:

	All 35 Items	15 Positive Items	20 Negative Items
Mean Score	106.8144	32.2990	74.5155
SD	6.8959	5.0791	6.7734
Correlation	.5842	.5826	.8508

This instrument sought to measure very fine and specific patterns of behavior of short duration which related to communicative and interpersonal aspects of the interaction which occured in the Interview. It was foreseen that such patterns of behavior would not vary a great deal or would not be observed by such observers to vary a great deal from individual to individual. Thus, a weak basis for this instrument was recognized at its inception. However, the desirability of having a measure of socialization which could be given quickly and which did not require extensive observation, was thought to out-weigh the weaknesses inherent in such an instrument. Thus, the standard deviation of ratings on the instrument as a whole, as well as on its two sub-sections, is not as great as would be desirable in such an instrument. However, considering the acknowledged weaknesses implicit in such an attempt at measurement, it would seem that the instrument would be of some usefulness, particularly if results obtained were used with caution. Also it is likely that the systems of weights (which were derived empirically and which represent the relative importance of each item as an indicator of positive or negative socialization) that are or can be added to the original ratings to arrive at an index of socialization, will compensate for the weaknesses in the instrument.

A detailed analysis can be made of this instrument by examining the ratings made item by item.

1 = + (Positive Patterns)
2 = - (Negative Patterns)

Correlation^1 = Point by Serial Correlation of Item With All Other Items or Entire Instrument

Correlation^2 = Point by Serial Correlation of Item With All Similarly + or - items

Item	+ or -	Mean	SD	Correlation^1	Correlation^2
1	1	1.36	.645	-.2839	.4988
2	2	3.69	.778	.4543	.6641
3	1	1.29	.732	.0249	.4290
4	1	1.53	.875	-.0744	.4938
5	1	1.70	.899	-.3567	-.5722
6	1	2.85	1.134	.2521	.5469
7	2	3.68	.711	.3557	.4450
8	1	3.32	1.021	.4521	.5442
9	1	1.59	.917	.2831	.6376
10	2	3.45	.874	.5153	.5389
11	1	1.35	.774	-.0207	.4166
12	2	3.84	.742	.4334	.5915
13	2	3.82	.626	.4987	.6826
14	2	4.00	0.	0.	0.
15	2	3.91	.456	.2699	.5262
16	1	1.26	.736	-.3480	.2744
17	1	3.45	.995	.4765	.5551
18	2	3.72	.822	.4894	.2351
19	1	3.85	.544	.3058	.0839
20	1	2.34	1.004	.2637	.4370
21	1	1.67	.992	.0016	.5373
22	2	3.77	.634	.4784	.7376
23	2	3.89	.515	.3597	.3092
24	2	3.73	.650	.4417	.6000
25	2	3.19	.912	.3202	.5286
26	2	3.77	.666	.4129	.6385
27	2	3.92	.371	.3205	.4643
28	2	4.00	0.	0.	0.
29	2	3.76	.654	.3146	.6205
30	2	3.77	.634	.4996	.6368
31	2	3.27	.903	.2664	.5220
32	1	1.42	.860	.2828	.2898
33	1	3.33	.960	.6849	.4089
34	2	3.54	.747	.3275	.6708
35	2	3.79	.625	.3500	.4650

Mean Rating Ranges	Items
4.0	14, 28
3.9 - 3.5	2, 7, 12, 13, 15, 18, 19, 22, 23, 24, 26, 27, 29, 30, 34, 35
3.4 - 3.0	8, 10, 17, 25, 31
2.9 - 2.5	6, 33
2.4 - 2.0	20
1.9 - 1.5	4, 7, 9, 21
1.4 - 1.0	1, 3, 11, 16, 32
.9 - .5	-
.4 - 0.	-

SD Ranges of Ratings	Items
1.2 - 1.1	6, 8, 20
1.0 - .9	4, 5, 9, 10, 17, 21, 25, 31, 32, 33
.9 - .7	2, 3, 7, 11, 12, 16, 18, 24, 29, 34
.6 - .5	1, 13, 15, 19, 22, 23, 26, 30, 35
.4 - .3	23
.2 - .1	-
.1 - 0.	14, 28

Correlation of Each + or - Item With All Other Similarly + or - Items

Correlation Range	Items
.79 - .70	22
.69 - .60	2, 9, 13, 24, 26, 29, 30, 34
.59 - .50	6, 8, 10, 12, 15, 17, 21, 25, 27, 31
.49 - .40	1, 3, 4, 7, 11, 20, 33, 35
.39 - .30	23
.29 - .20	16, 18, 28
.19 - .10	-
.09 - 0.	14, 19, 28
...	
-.59 - -.59	5

Correlation of Each Item With Entire Instrument

Correlation Range	Items
.69 - .60	33
.59 - .50	10
.49 - .40	2, 8, 12, 13, 17, 18, 22, 24, 26, 30
.39 - .30	7, 19, 23, 25, 27, 29, 34, 35
.29 - .20	6, 9, 15, 20, 31, 32
.19 - .10	-
.09 - 0.	3, 14, 21, 28
0. - -.09	4, 11
-.10 - -.19	-
-.20 - -.29	1
-.30 - -.39	5, 16

From these data it would seem that teachers rated somewhat more consistently on negative items than on positive ones. This suggests that perhaps an improved instrument might be devised utilizing only negative items. From the mean scores and standard deviations of Items No. 14 and 28, it is clear that these items have no discriminatory power or range. Items No. 1, 3, 4, 5, 11, 14, 16, 21 and 28 correlate poorly or negatively with the total rating score achieved by the instrument. Consequently, these items are in need of revision.

Record of Observations of School Adjustment and Behavior

Teachers' Ratings

Ninety-seven subjects were rated on this instrument by eight teachers. The rating scale used was:

0 = Never has behaved this way
1 - Has behaved this way at least once
2 = Sometimes has behaved this way
3 = Frequently has behaved this way
4 = Has behaved this way characteristically
5 = Has behaved this way as a dominant pattern

The overall results obtained were:

	All 87 Items	41 Positive Items	46 Negative Items
Mean Score	167.7938	114.2165	53.5773
SD	25.6744	33.5904	25.2831
Correlation	.8119	.9633	.9228

This instrument, it will be remembered, sought to measure very gross, complex patterns of behavior which may persist over a long period of time. Judging from the relatively high SD's and indices of internal correlation, it would seem to do so effectively and consistently. This instrument does have adequate discriminatory power and range.

A detailed analysis can be made of this instrument by examining the ratings made item by item.

1 = + (Positive Patterns)
2 = - (Negative patterns)
Correlation^1 = Point by Serial Correlation of Item With All Other Items Or Entire Instrument

Correlation^2 = Point by Serial Correlation of Item With All Other Similarly + or - items.

Item	+ or -	Mean	SD	Correlation^1	Correlation^2
1	2	1.46	1.332	.2084	.4959
2	1	2.59	1.375	.5853	.6702
3	1	2.77	1.475	.5904	.6868
4	1	2.25	1.414	.3466	.5242
5	2	2.40	1.511	-.0226	.2407
6	2	.45	.718	-.1162	.2524
7	2	.46	.964	.1034	.4565
8	2	1.39	1.305	-.1192	.5063
9	2	1.12	1.237	-.1764	.4884
10	1	1.95	1.319	.4926	.7486
11	1	3.06	1.591	.0384	.0661
12	1	2.56	1.370	.4011	.7759
13	1	3.39	1.281	.5821	.7725
14	1	3.04	1.267	.5490	.7647
15	1	3.22	1.160	.5967	.8451
16	2	1.10	1.144	.1618	.4613
17	1	1.45	1.436	.5425	.6603
18	1	2.95	1.365	.3621	.8115
19	1	3.12	1.058	.3722	.7673
20	1	2.63	1.438	.3885	.8183
21	1	3.21	.994	.5966	.7306
22	1	3.15	1.431	.2629	.6701
23	2	.34	.798	.0875	.4210
24	2	.39	.697	-.0923	.4933
25	2	.62	1.020	.1021	.5883
26	2	.94	1.200	-.1042	.6819
27	2	.33	.669	-.1628	.4128
28	2	1.43	1.331	.0267	.8360
29	2	.81	1.106	.2760	.4942
30	2	.57	.772	.0392	.3424
31	2	.90	1.180	.0864	.6591
32	2	.65	1.006	-.0204	.2991
33	1	2.84	1.382	.0139	.2907
34	2	1.36	1.507	.0224	.0930
35	2	.66	1.166	.0807	.4272
36	2	2.20	1.136	.3699	.4959

Item	+ or -	Mean	SD	Correlation[1]	Correlation[2]
37	1	2.78	1.341	.4556	.4006
38	2	.77	1.144	.2437	.4403
39	1	3.40	.938	.3806	.6491
40	1	2.47	1.378	.4218	.8032
41	2	2.11	1.331	-.0304	.7264
42	2	2.00	1.260	.1138	.7407
43	1	2.85	1.106	.3292	.7148
44	2	1.29	1.284	.3308	.4518
45	2	.80	1.100	-.0522	.4476
46	1	2.74	1.459	.5701	.8266
47	1	2.46	1.547	.6883	.6728
48	1	2.78	1.409	.4728	.8006
49	2	1.88	1.160	.3730	.2608
50	1	3.32	1.021	.6606	.7772
51	1	3.24	1.110	.2318	.6939
52	1	3.40	1.062	.2130	.5009
53	2	1.57	1.362	.1965	.5005
54	1	3.25	.964	.5071	.7446
55	1	2.98	1.252	.2892	.5783
56	1	3.47	.985	.2170	.6360
57	1	3.65	1.056	.3439	.6880
58	2	.93	1.058	.1973	.5471
59	2	2.57	1.035	.1868	.3241
60	2	1.31	1.311	-.0952	.3644
61	1	1.57	1.083	-.0444	-.3907
62	2	1.01	1.206	.1962	.6681
63	2	1.62	1.327	.0827	.7869
64	2	1.54	1.393	-.0701	.6649
65	2	.87	1.071	.2761	.6196
66	2	1.36	.965	-.1775	.3121
67	2	1.12	1.262	-.1535	.3880
68	1	2.36	1.245	.6896	.5922
69	2	.88	1.169	.1400	.7239
70	2	1.74	1.445	-.1009	.5410
71	2	.91	1.131	-.2814	.3457
72	1	2.66	1.428	.4655	.7699
73	1	2.78	1.254	.4547	.5348
74	1	2.12	1.459	.3518	.5981
75	2	1.01	1.248	.2762	.5315
76	2	1.52	1.159	-.0255	.4111
77	2	1.47	1.269	-.0078	.3886
78	2	1.54	1.422	-.0026	.6386
79	1	2.70	1.286	.4548	.8015
80	1	2.56	1.157	.5069	.7513

Item	+ or -	Mean	SD	Correlation[1]	Correlation[2]
81	1	1.85	1.357	.4884	.3476
82	1	2.36	1.430	.6366	.7738
83	1	3.02	1.377	.6203	.7525
84	1	3.26	1.254	.4179	.7248
85	2	1.68	1.289	.2766	.1477
86	2	.11	.348	.1030	.2714
87	2	.38	.818	.0808	.4166

Point By Serial Correlation With All Other Similarly + or - Items

Correlation Ranges	Items
.89 - .80	15, 18, 20, 28, 40, 46, 48, 79
.79 - .70	10, 12, 13, 14, 19, 21, 41, 42, 43, 50, 54, 63, 69, 72, 80, 82, 83, 84
.69 - .60	2, 3, 17, 22, 26, 31, 39, 47, 51, 56, 57, 62, 64, 65, 78
.59 - .50	4, 8, 25, 52, 53, 55, 58, 68, 70, 73, 74, 75
.49 - .40	1, 7, 9, 16, 23, 24, 27, 29, 35, 36, 37, 38, 44, 45, 76, 87
.39 - .30	30, 59, 60, 66, 67, 71, 77, 81
.29 - .20	5, 6, 32, 32, 49, 86
.19 - .10	85
.09 - 0.	11, 34
...	-
-.30 - -.39	61

Point By Serial Correlation of Item With All Other Items or Entire Instrument

Correlation Ranges	Items
.69 - .60	50, 68, 82, 83
.59 - .50	2, 3, 13, 14, 15, 17, 21, 46, 47, 54, 80
.49 - .40	10, 12, 37, 40, 48, 72, 73, 79, 81, 84
.39 - .30	4, 18, 19, 20, 36, 39, 43, 44, 49, 57, 74
.29 - .20	1, 22, 29, 38, 51, 52, 55, 56, 65, 75, 85

(Continued)

Correlation Ranges	Items
.19 - .10	7, 16, 25, 42, 58, 59, 62, 69, 86
.09 - 0.	11, 23, 28, 30, 31, 33, 34, 35, 63, 76, 77, 78, 87
0. - -.09	5, 24, 32, 41, 45, 60, 61, 64
-.10 - -.19	6, 8, 9, 26, 27, 66, 67, 70
-.20 - -.29	71

Mean Rating Ranges	Items
3.9 - 3.5	57
3.4 - 3.0	11, 13, 14, 15, 19, 21, 22, 39, 50, 51, 52, 54, 56, 83, 84
2.9 - 2.5	2, 3, 12, 18, 20, 33, 37, 40, 43, 46, 48, 55, 59, 68, 72, 73, 79, 80
2.4 - 2.0	4, 5, 36, 41, 42, 47, 74, 82
1.9 - 1.5	1, 10, 49, 53, 61, 63, 64, 70, 76, 78, 81, 85
1.4 - 1.0	8, 9, 16, 17, 28, 34, 44, 60, 62, 66, 67, 75, 77
.9 - .5	6, 7, 23, 26, 29, 30, 31, 32, 35, 38, 45, 58, 65, 69, 71
.4 - 0.	23, 24, 27, 86, 87

Standard Deviation Ranges of Rating	Items
1.6 - 1.5	3, 5, 11, 34, 46, 47, 74
1.4 - 1.3	1, 2, 4, 8, 10, 12, 13, 14, 16, 17, 18, 20, 22, 28, 33, 37, 40, 41, 42, 44, 48, 53, 55, 60, 63, 64, 67, 68, 70, 72, 73, 75, 77, 78, 79, 81, 82, 83, 84, 85
1.2 - 1.1	9, 15, 19, 26, 29, 31, 35, 36, 38, 43, 45, 49, 51, 52, 57, 58, 61, 62, 69, 71, 76, 80
1.0 - 1.9	7, 21, 25, 32, 39, 50, 54, 56, 59, 65, 66
.8 - .7	6, 23, 24, 27, 30, 87
.6 - .5	-
.4 - .3	86
.2 - .1	-
.1 - 0.	-

From the above data it is clear that teachers rated more consistently the negative items as a group and the positive items as a group than they did all negative and positive items considered as a group. This would seem to suggest that an improved instrument might be devised by utilizing only negative or only positive items.

Items No. 5, 6, 8, 9, 24, 26, 27, 32, 41, 45, 60, 61, 64, 66, 67, 70, and 71 correlate negatively with total rating score, in other words, contribute nothing to the total rating score and thus need revision. Items 7, 11, 16, 23, 25, 28, 30, 31, 33, 34, 35, 42, 58, 59, 62, 63, 69, 76, 77, 78, 86, and 87 have a correlation with the total rating score of less than .19 but greater than 0. and thus contribute very little to the total score. Item No. 86 has a standard deviation of less than .4 and thus has little range or discriminatory power. It is likely, however, that the systems of weights that are to be added to the original ratings of children, since these weights represent the relative importance of each item as an indicator of positive or negative socialization, will compensate for the weaknesses evident in the items referred to here.

Teacher Aides Ratings

Fifty-seven subjects were rated by five teacher aides on the Record of Observations of School Adjustment and Behavior. The overall results obtained were:

	All 87 Items	41 Positive Items	46 Negative Items
Mean Score	171.7463	124.1642	47,5821
SD	32.5436	38.0638	22.4288
Correlation	.8734	.9672	.8942

From these data it can be seemed that the teacher aides rated positive items higher and negative items lower than did the teachers, that is, the aides rated children more favorably. This is in line with what one would expect of less experienced and less trained observers.

n 1 = + (Positive Patterns)
2 = - (Negative Patterns)
Correlation[1] = Point By Serial Correlation of Item With All Other Items Or Entire Instrument
Correlation[2] = Point By Serial Correlation of Item With All Other Similarly + or - Items

Item	+ or -	Mean	SD	Correlation[1]	Correlation[2]
1	2	1.18	1.337	.0515	.7035
2	1	2.46	1.549	.7682	.7277
3	1	2.40	1.693	.7494	.7569
4	1	2.70	1.584	.4946	.6126
5	2	2.30	1.574	-.4297	.0433
6	2	.30	.733	.3353	.3624
7	2	.54	1.189	-.0189	.4479
8	2	1.16	1.323	.1320	.6081
9	2	1.01	1.264	.1358	.6364
10	1	1.64	1.390	.5478	.5451
11	1	3.21	1.825	.1587	.2271
12	1	2.75	1.459	.7208	.8340
13	1	3.43	1.417	.5936	.7937
14	1	2.99	1.481	.7056	.8390
15	1	3.24	1.436	.4941	.4787
16	2	1.19	1.249	.4320	.3072
17	1	1.51	1.799	.7858	.7289
18	1	3.30	1.486	.4980	.8296

Item	+ or -	Mean	SD	Correlation[1]	Correlation[2]
19	1	3.42	1.283	.5287	.8124
20	1	2.99	1.501	.5288	.7810
21	1	3.70	1.258	.4794	.5166
22	1	3.46	1.529	.2984	.4139
23	2	.15	.553	-.0692	.3803
24	2	.22	.687	..1073	.5541
25	2	.37	.709	-.1091	.6143
26	2	.60	1.008	-.1828	.7165
27	2	.39	.791	.0821	.5889
28	2	.90	1.211	-.0791	.6528
29	2	.79	1.264	.3862	.5044
30	2	.37	.709	.1206	.3562
31	2	.73	1.101	.0298	.6932
32	2	.36	.685	.1608	.3791
33	1	3.15	1.538	.3633	.5278
34	2	1.82	1.718	.4716	.0298
35	2	.61	1.171	.1333	.6063
36	2	1.84	1.367	.1645	.2845
37	1	3.12	1.355	.7310	.6116
38	2	.49	.887	.2700	.4858
39	1	3.97	.863	.4072	.5865
40	1	2.82	1.465	.4986	.7950
41	2	1.99	1.240	-.0356	.6342
42	2	1.57	1.307	.0308	.6196
43	1	3.16	1.345	.5472	.7671
44	2	.79	1.204	.2093	.5369
45	2	.64	.859	.1591	.5045
46	1	3.07	1.469	.6672	.7668
47	1	2.51	1.782	.6758	.6910
48	1	3.00	1.456	.6531	.7916
49	2	2.00	1.476	.1342	.1695
50	1	3.70	1.106	.6304	.7191
51	1	3.51	1.342	.4829	.7674
52	1	3.79	1.073	.2230	.5324
53	2	1.36	1.254	-.1312	.5953
54	1	3.61	1.050	.5176	.7624
55	1	3.34	1.299	.3219	.6417
56	1	3.70	1.185	.4401	.7107
57	1	3.97	1.197	.4609	.7348
58	2	1.19	1.123	-.0567	.3144
59	2	2.60	1.147	.1384	-.0576
60	2	1.28	1.244	-.0325	.2274
61	1	1.31	.996	-.0003	-.1014
62	2	.58	1.161	-.0198	.6582

Item	+ or -	Mean	SD	Correlation[1]	Correlation[2]
63	2	1.16	1.431	-.0571	.6681
64	2	1.42	1.351	-.0886	.4968
65	2	.90	1.247	.4795	.5356
66	2	1.07	.982	-.6588	.2121
67	2	1.22	1.302	-.2103	.3036
68	1	2.69	1.295	.5883	.5541
69	2	.84	1.204	.0157	.5389
70	2	2.01	1.398	-.3588	.1930
71	2	.90	1.271	.0502	.0733
72	1	3.16	1.532	.6413	.8182
73	1	3.30	1.338	.4948	.7004
74	1	2.75	1.250	.4703	.6258
75	2	.63	1.049	.1394	.5982
76	2	1.55	1.110	-.2671	.4067
77	2	1.27	1.322	-.0057	.4647
78	2	1.07	1.407	-.1231	.7246
79	1	3.30	1.372	.4949	.7490
80	1	2.72	1.336	.6945	.7598
81	1	1.66	1.482	.4560	.1807
82	1	2.66	1.598	.6796	.8671
83	1	3.37	1.412	.6849	.8539
84	1	3.63	1.433	.5060	.7684
85	2	1.55	1.261	.3231	.0398
86	2	.24	.601	-.1641	.2422
87	2	.42	.964	-.1412	.3152

An item by item analysis of aides' rating can be made by examining point by serial correlations of each item with all other items and standard deviations per item.

Correlation Ranges	Items
.79 - .70	2, 3, 12, 14, 17, 37
.69 - .60	46, 47, 48, 50, 72, 80, 82, 83
.59 - .50	10, 13, 19, 20, 43, 54, 68, 84
.49 - .40	4, 15, 16, 18, 21, 34, 39, 40, 51, 56, 57, 65, 73, 74, 79, 81
.39 - .30	6, 29, 33, 55, 85
.29 - .20	22, 38, 44, 52
.19 - .10	8, 9, 11, 24, 30, 32, 35, 36, 45, 49, 59, 75
.09 - 0.	1, 27, 31, 42, 69, 71
0. - .09	7, 23, 28, 41, 58, 60, 61, 62, 63, 64, 77
-.10 - -.19	25, 26, 53, 78, 86, 87
-.20 - -.29	67, 76
-.30 - -.39	70
-.40 - -.49	5
-.50 - -.59	-
-.60 - -.69	66

Standard Deviation Ranges	Items
1.9 - 1.8	11, 17, 47
1.7 - 1.6	2, 3, 4, 5, 14, 34, 82
1.5 - 1.4	10, 12, 13, 15, 18, 20, 22, 29, 33, 36, 37, 40, 46, 48, 49, 63, 64, 70, 71, 72, 78, 79, 81, 83, 84
1.3 - 1.2	1, 7, 8, 9, 16, 19, 21, 28, 41, 42, 43, 44, 51, 53, 55, 56, 57, 60, 62, 65, 67, 68, 69, 73, 74, 77, 80, 85
1.1 - 1.0	26, 31, 35, 59, 52, 54, 58, 59, 61, 75, 76
.9 - .8	27, 38, 39, 45, 66, 87
.7 - .6	6, 23, 24, 25, 30, 32, 86,

Items No. 5, 7, 23, 25, 26, 28, 41, 53, 58, 60, 61, 62, 63, 64, 67, 70, 76, 77, 78, 86, and 87 correlated negatively with total rating score. Items No. 5, 26, 41, 60, 61, 64, 67, 70 coincide with teachers' ratings in being negatively correlated with total score. Items No. 1, 8, 9, 11, 24, 27, 30, 31, 32, 35, 36, 42, 45, 49, 59, 69, 71, and 75 have a correlation with the total rating score of less than .19 but greater than 0. and thus contribute very little to total score.

Items No. 5, 7, 9, 11, 23, 24, 25, 26, 27, 28, 30, 31, 32, 35, 41, 42, 45, 58, 59, 60, 61, 62, 63, 64, 67, 69, 70, 71, 76, 77, 78, 86, and 87 coincide with teachers' ratings in being negatively correlated with total score or in having a correlation of less than .19 but greater than .0. In agreement with teachers' rating, Item No. 86 has the lowest standard deviation.

SUMMARY, DISCUSSION AND CONCLUSIONS

CHAPTER V

The object of this study was to develop a battery instrument (TOBABS) for measuring child bilingualism and bicultural socialization. Three sets of instruments were dealt with in this report: a series of six tests for measuring linguistic competence in English (ECS), a series of six tests for measuring linguistic competence in Spanish (SCS) and a series of three instruments for measuring socialization or adjustment (IOB). Data from an administration of the instruments to ninety-seven subjects were presented and content validity and reliability were ascertained. An item by item analysis of all instruments was carried out to ascertain which items were defective and in need of further revision. Intercorrelations of the various sub-tests and sub-measures with each other and with other measures and variables were presented in Appendix C. A report on an interpretative use of the instruments in evaluating an experimental bilingual program was also included as Appendix D.

With respect to content validity of the two language series developed, it was concluded that Sub-Tests III and IV in both languages lacked a completely satisfactory validity and that these two sub-tests must be used with some caution. The content validity of Sub-Tests, I, II, V, and VI in both languages appeared adequate, although the Spanish tests were somewhat weaker than the comparable English tests.

The English and Spanish series of tests as second-language tests appeared to be somewhat deficient in reliability and discriminatory range. However, the sample of native English-speaking children who took the Spanish Series was too small to permit definitive conclusions. It is suggested that satisfactory results could be achieved if the suggested revisions of items were carried out and certain changes made in the instructions to the child for marking and responding. The marking of Sub-Tests III and IV should be made consistent with all the other marking the child was required to do. The instructions for scoring the individually administered language tests should also be revised. Specifically, scoring should be limited to linguistic responses, not gestural and non-verbal ones. The range of language Sub-Tests V and VI can probably be improved upon by altering the directions for administering and eliminating some of the cues given the child. The two or three words spoken as stimuli for each item on Sub-Test V can be given without pauses. With regard to Sub-Test VI, the tester can read each riddle and immediately let the child select one of the three pictures as a solution, without pronouncing the word equivalents for each picture on the answer sheet.

The measures of socialization appeared adequate. It is suggested that the Personal-Social Responsive Interview be eliminated because it is an unnecessary duplication. Language Sub-Tests I and II as native-language tests can be substituted in its place and provide an experiential basis for rating a child's behavior on the Rating of a Child's Behavior and Responsiveness. The Rating of a Child's Behavior and Responsiveness appeared to have less than desirable range and discriminatory power, however, it was acknowledged that it attempted to measure subtle differences in children's communicative behavior and social responsiveness. The Record of School Adjustment and Behavior appear to be completely satisfactory with respect to reliability and range.

The experience acquired in developing these instruments suggests the desirability and feasibility of continuing the development, refinement and standardization of these instruments for measuring child bilingualism and socialization.

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INSTRUMENTS: Tests of Bilingualism and Bicultural Socialization

APPENDIX A

General Description

The Tests of Bilingualism and Bicultural Socialization[1] (TOBABS) consists of three groups or series of instruments: 1) an English Competence Series, 2) a Spanish Competence Series, and 3) an Inventory of Socialization. The English and Spanish series are comparable but not totally equivalent version of the same thing. Each language competence series[2] is made up of the following individual sub-tests (numbers of items are given in parenthesis):

I. Recognition of Question and Imperative Patterns (25)

II. Comprehension of Commands and Directions (25)

III. Pronunciation: Sound Discrimination (30)

IV. Grammar: Recognition of Grammatically Correct Sentences (30)

V. Oral Vocabulary (24, 63, or 144)

VI. Listening Comprehension of Connected Utterances (20 or 60).

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[1] Certain minor revisions have been incorporated in the version of the instruments presented here, particularly in the instructions for marking Sub-Test III and IV and in the Spanish Sub-Test I. The original versions of the items revised have been presented and considered in Chapter IV.

[2] For this project a number of other sub-tests were also constructed. These are excluded from the presentation here because they were not used in the final administration since their use would have prolonged the testing period. Therefore, no data are available on other sub-tests. Also, the forms of the instrument reported on here are the A forms. B forms of the English and Spanish series have been constructed; however, no data are available as yet on them.

The Inventory of Socialization consists of two instruments (and three forms to be completed by the test administrator):

- I. Inventory of Personal-Social Responsiveness
  - a. The Personal-Social Responsiveness Interview (40)
  - b. Rating of the Child's Behavior and Responsiveness in the Interview (35)
- II. Record of Observation of School Adjustment and Behavior (87)

The Interview and the post-interview Rating of the child are conducted by a teacher in the school other than the child's homeroom teacher. The record is filled in by the child's homeroom teacher and, wherever present, a teacher aide.

General Instructions for Administration

All of the language competence series sub-tests are to be given by the pupil's homeroom teacher. The first two must be given individually by means of an interview, each test lasting from five to ten minutes. The remaining sub-tests are to be given to groups of 10 to 12 children. There is no time limit on any of these tests, however, it is suggested that the test administrator proceed at a brisk pace whenever possible. As a general rule, no one testing period, whether group or individual, should exceed 30 minutes in duration.

The person administering the competence tests and the interview of personal-social responsiveness should be thoroughly acquainted with the exact language spoken as well as with the procedures employed. He should read over the entire test -- preferably aloud -- in order to make himself familiar with the language used before the test is actually given. Since the competence tests are intended to be measures of the normal and authentic uses of language as a vehicle of communication and interaction, the person administering these tests should speak to the child or group of children in a normal, conversational style with no undue exaggerations of pronunciation and intonation and with no excessive slowing down of his rate of speech. The test administrator should try to say each sentence on the test as a unit. He should particularly avoid saying a sentence by pronouncing it a word at a time. A normal, conversational style of speaking can be most easily achieved if the tester will read each item to himself, then glance away from the page, and from memory say the item to the child or group of children.

General Instructions for Individual Testing

The individual testing should be conducted in a quiet room. The tester and child should be isolated from other children and adults, or at least, out of sight of other children in the room. The child should be comfortably seated and with his entire body visible to the tester. Some items on the individual tests require the child to perform actions. A convenient arrangement is for the child and tester to be seated at the same side of a low table, facing one another. The tester should have his test and scoring sheet to one side, away from the child, and in a comfortable writing position. He should strive to keep his attention on the child as much as possible and not on his reading and writing activities.

When the tester meets the child for the first time or resumes a period of testing, he should greet the child in the language of the test, ask him to take a seat, and engage in brief, friendly conversation. The nature of each task should be explained briefly to the child in either Spanish or English or both languages. Specific instructions are given for some individual tests, but these are primarily suggestions. The tester does not necessarily have to follow them exactly during the preliminary explanations. The tester should rely primarily on the practice exercises preceding each test for communicating to the child what is expected of him. During the practice exercises, the tester should encourage a child's responsiveness by saying to him, "All right."; "Very good."; "That's very good."; etc. when he responds appropriately. Generally, the child should be given the correct answers to the practice exercises after he has attempted to respond to them. Also, during the practice exercises questions may be repeated and responses may be prompted from the child. If the child responds in a language other than the language of the test the tester should encourage the child to answer in the language of the test by saying, "Can you say that in English?" or "¿Puedes decir eso en español?" Thus, the tester should assume that he has considerable freedom in the way he communicates to the child what is expected of him on the test before the test begins.

Once the test begins, however, the tester should adhere strictly to the language and procedures of the test. The tester should not repeat an item unless the testing session is interrupted by noise or some distraction. The tester should, however, repeat an item under one other condition: when the child spontaneously signals to the interviewer by means of work, interjection or gesture for a repetition (see specific tests for further instructions). During the test the child should feel that his efforts are approved of, for example, by seeing the tester smile at him, but he should not be told or given any specific indication that his responses are correct or not. The tester should allow the child approximately five secoods to respond. This can be determined by counting to oneself, "one hundred and one, one hundred and two, one hundred and three, one hundred and four, one hundred and five." A second trial is not permitted the child, however, if he changes his response spontaneously, the second response rather than the first should be scored. Immediately after finishing each test, the examiner should record any condition or event which may help to interpret the results of the test. He may do so on the scoring sheet. When a child responds to an item appropriately but in a language other than that of the test, the examiner should record these instances.

General Instructions for Group Testing

Ten to twelve children can be tested in a group at one time. A test in only one language should be given at any one time in the room. Also, group testing should be utilized, wherever possible, for children of the same linguistic background. The children should be seated comfortably with sufficient space for their answer sheets. Care should be taken in the seating arrangement to avoid copying, e.g. children should not be seated near one another but spread out in the room.

Before the group testing period begins the tester should copy on the blackboard that part of the child's answer sheet where he is to mark the responses for the practice items (i.e., P1., P2., P3., etc.) which precede each test. The pictures which appear on a child's answer sheet for the practice exercises can be very roughly sketched on the blackboard. The tester should write each child's name and class/section on the answer sheet, as well as indicate (by checking the appropriate space) whether the test is in English or Spanish and the sub-test given. When the children are seated, the tester should distribute the answer sheets and pencils or crayons to the children. The tester should then explain briefly to the children what is expected of them on the test, in either English or Spanish or both languages. Here again, as with the individual tests, the tester should take the same freedoms with the preliminary instructions and practice exercises: i.e. using his own judgment and discretion of how best (and specifically) to communicate to the group of children what is expected of them. The tester should do the practice exercises with the children and elicit or prompt correct responses, marking the answers on the blackboard. He or a teacher assistant should circulate around the room to see whether the children are marking their answer sheets properly. Each test item should be said in a loud, clear voice. Items are not to be repeated unless a distraction or disturbance interrupts the testing period. The numbers of the test items should be given at least twice to insure that the children do not lose their place on the answer sheet. The specific instructions for marking may be repeated when the tester thinks it is necessary. In some cases the tester may wish to have a group of children use a strip of paper to keep track of their place on the answer sheet. The tester should allow the children approximately 10 seconds to mark their responses in a group. Immediately after each group test is completed the tester should record any condition or event which may help to interpret the results of the test.

I.

ENGLISH COMPETENCE SERIES

RECOGNITION OF QUESTION AND IMPERATIVE PATTERNS

FORM A

INSTRUCTIONS

This is a test of the child's ability to recognize the various types of questions and commands in English. The language employed is simple, common, and within the range of Spanish-speaking children with some contact with English. More than a measure of the knowledge of specific language items and sentences, it is an index of the child's familiarity with the basic interrogative and imperative patterns of English. It is possible on this test that the child can, in some cases, respond appropriately without actually comprehending the specific content of a question, e.g., by responding to cues of intonation, word order, and function words. The child's recognition of these patterns will be judged by his verbal as well as non-verbal (i.e. gestural and interjectional) responses. The criteria for making particular judgments of "appropriateness" of response will be supplied for each question or command.

This test is to be administered by means of an individual interview with the child.

Items on the test are to be scored on the separate answer sheet by the interviewer as: "R" (right or approriate) or "W" (wrong, inappropriate, no response). Criteria are supplied for scoring a response as right or appropriate, all other responses are to be scored "wrong". In some cases the interviewer should use his own discretion in scoring. Remember, that for a child's response to be scored right or appropriate, it need only indicate that he has understood the basic type of question or command. Thus, his response might be factually wrong, grammatically incorrect, or employ socially unacceptable forms (e.g. "I ain't.") and still be scored as "right" or "appropriate".

The interviewer should in all cases accept and score the child's first response unless the child changes his first response spontaneously, in which case the child's second response is to be scored. The interviewer should not repeat any question or direction unless the child spontaneously signals by means of word, interjection or gesture that he did not hear or that he wants the interviewer to repeat. The child may, for example, indicate a desire for repetition by saying, "What did you say?"; "What?"; "I'm sorry but I didn't hear (understand)."; "Uh?"; etc. The child may also signal a desire for repetition by means of body movement and gesture, for example, by turning an ear toward the interviewer.

PRACTICE EXERCISES

P1. WHAT'S YOUR NAME?

Credit as right or appropriate a response consisting of first name only or first name and last name.

P2. HOW OLD ARE YOU?

Credit as right or appropriate any response which is a number or contains a number. Also credit as right if a number of fingers is held up.

P3. HAVE YOU GOT BROTHERS AND SISTERS?

Credit as appropriate or right any affirmative or negative expression, interjection or gesture.

P4. ASK ME WHAT MY NAME IS.

"What's your name?"; "Tell me your name." etc.

"All right. That's very good."

"Now I'm going to ask you some more questions, Listen carefully because I will say them only one time. Answer as best you can."

TEST

1. WHO'S YOUR BEST FRIEND AT SCHOOL?

   Any name or reference to a person.

2. ARE YOU A BOY? (substitute GIRL if child being interviewed is a girl.) Any affirmative expression, interjection or gesture.

3. IS SUGAR SWEET OR SOUR?

   Any expression containing "sweet".

4. WHAT DO YOU LIKE TO EAT BEST?

Any indication of anything edible.

5. COUNT TO FIVE FOR ME.

Counting out loud to five or silent counting on fingers to five.

6. IS THIS MY NOSE? (Interviewer holds his own ear).

Any negative expression, interjection or gesture.

7. WHERE DO YOU LIKE TO PLAY?

Any reference to place.

8. WHICH IS BIGGER, A CAT OR A HORSE?

Any expression which contains "horse".

9. DO YOU KNOW HOW TO RUN?

Any affirmative expression, interjection or gesture.

10. TELL ME WHAT IS TWO AND TWO.

Any number spoken or a number of fingers held up.

11. GIRLS LIKE TO PLAY WITH DOLLS, DON'T THEY?

Any affirmative expression, interjection or gesture.

12. ARE YOU EIGHT YEARS OLD? (Use a different age from the

one given in P2.) Any negative expression, interjection or gesture.

13. ASK ME IF I'VE GOT A PEN.

"Do you have a pen?"; "Have you got a pen?"; "Have you a pen?"; "You have a pen?"; etc.

14. HOW MANY DAYS ARE THERE IN A WEEK?

Any number spoken or any number of fingers held up.

15. ARE MY EYES CLOSED? (Interviewer's eyes are closed.)

    Any affirmative expression, interjection or gesture.

16. IS A PENCIL MADE OF WOOD OR PAPER?

    Any expression which contains "wood."

17. IS TODAY TUESDAY? (Substitute correct day of the week.)

    Any affirmative expression, interjection or gesture.

18. SAY "THANK YOU."

    A spoken "Thank you."

19. IS A TRAIN LONGER THAN A BUS?

    Any affirmative expression, interjection or gesture.

20. TELL ME TO LOOK AT MY WATCH.

    "Look at your watch." etc.

21. DOESN'T A RABBIT HAVE LONG EARS?

    Any affirmative expression, interjection or gesture.

22. WOULD YOU RATHER DRINK MILK OR WATER?

    Any expression which contains "milk" or "water" and not both words.

23. DOES CHRISTMAS COME IN SEPTEMBER?

    Any negative expression, interjection or gesture.

24. WHAT DAY COMES AFTER FRIDAY?

    "Saturday."

25. TELL ME WHAT YOU ARE DOING RIGHT NOW.

    Any reasonable reference to what the child is doing at the moment, e.g. "sitting, answering questions, talking to you, looking at you," etc.

INDIVIDUAL SCORING SHEET

ENGLISH________

SPANISH________

NAME OF CHILD____________________

CLASS/SECTION____________________

INTERVIEWER____________________

RECOGNITION OF QUESTION AND IMPERATIVE PATTERNS________

COMPREHENSIONS OF COMMANDS AND DIRECTIONS ____________

INSTRUCTIONS: Circle "R" for a right response and "W" for a wrong response or no response.

PRACTICE EXERCISES

P1. R W

P2. R W

P3. R W

P4. R W

TEST

1. R W
2. R W
3. R W
4. R W
5. R W
6. R W
7. R W
8. R W
9. R W
10. R W
11. R W
12. R W
13. R W
14. R W
15. R W
16. R W
17. R W
18. R W
19. R W
20. R W
21. R W
22. R W
23. R W
24. R W
25. R W

COMMENTS:

II.

ENGLISH COMPETENCE SERIES

COMPREHENSION OF COMMANDS AND DIRECTIONS

FORM A

INSTRUCTIONS

This is a test of a child's ability to comprehend specific commands and directions in English. The interviewer asks the child to perform certain actions and his comprehension of the language used by the interviewer is judged by the action he performs. The child is not required to say anything.

The child's responses are to be scored on the separate answer sheet as "R" (right) or "W" (wrong, no response). A response is to be scored right if the child performs the precise action called for thus demonstrating that he has understood the specific direction or command of the interviewer.

This test is to be administered by means of an individual interview with the child.

The interviewer should in all cases accept and score the child's first response unless the child changes his first response spontaneously, in which case the child's second response is to be scored, The interviewer should not repeat any command or direction unless the child spontaneously signals by means of word, interjection or gesture that he did not hear or that he wants the interviewer to repeat. The child may, for example, indicate a desire for repetition by saying, "What did you say?"; "What?"; "I'm sorry but I didn't hear (understand)."; "Uh?"; etc. The child may also signal a desire for repetition by means of body movement and gesture, for example, by turning an ear toward the interviewer.

After the interviewer and child are seated facing one another, the interviewer should say to the child, "Now we're going to play a kind of game. I'm going to tell you to do something and I want you to try to do it. I'll say everything only once so you must listen carefully."

PRACTICE EXERCISES

P1. RAISE YOUR HAND.

P2. POINT TO THE CEILING.

P3. TOUCH YOUR FOOT.

P4. STAND UP.

"All right. Very good. Let's try some more. Listen carefully. I'm going to say each thing only once."

TEST

1. MOVE YOUR HEAD.
2. GIVE ME YOUR HAND.

3. CLOSE YOUR EYES.
4. COVER YOUR EARS WITH YOUR HANDS.
5. TOUCH YOUR NOSE.
6. HIT YOUR KNEE.
7. LOOK UNDER YOUR CHAIR.
8. SHOW ME THE PALM OF YOUR HAND.
9. SHOW ME WHERE YOUR HEART IS.
10. MOVE YOUR HAND UP AND DOWN.
11. PUT YOUR HANDS BEHIND YOUR BACK.
12. STAND UP AND TURN AROUND ONCE. (Ask child to sit down again.)
13. OPEN YOUR MOUTH WIDE.
14. SHOW ME YOUR ELBOW.
15. POINT TO YOUR TEETH.
16. RAISE YOUR LEFT HAND.
17. TURN YOUR HEAD AND LOOK OVER YOUR SHOULDER.
18. LIFT YOUR FEET OFF THE FLOOR.
19. WAVE GOODBYE TO SOMEONE OVER THERE.
20. STAND UP AND WALK AROUND. (Ask child to sit down again.)
21. PRETEND YOU ARE READING A BOOK. (Explain "pretend" to the child.)
22. PRETEND YOU ARE DRIVING A CAR.
23. PRETEND YOU ARE PLAYING THE PIANO.
24. PRETEND YOU ARE THROWING A BALL.
25. PRETEND YOU ARE DRYING YOUR HANDS ON A TOWEL.

III.

ENGLISH COMPETENCE SERIES

PRONUNCIATION: Sound Discrimination

FORM A

INSTRUCTIONS

The tester is to pronounce each pair of words and ask the children to determine if the two words sound exactly the SAME (or if the two words mean the SAME thing) or are DIFFERENT in some way (or mean different things). The tester should say each pair of words only once. The tester should be very careful to pronounce the two words with the same falling intonation. This can be best accomplished by pronouncing each word as a separate phrase and not by pronouncing the pair of words as two items in sequence. The period after the first word in each pair is to remind the tester that he is to make a full stop (falling intonation) between the two words. Also, the tester should be careful to pronounce each word normally and naturally and without exaggerating his pronunciation. The tester should be especially careful not to exaggerate the difference in a pair of different words. The tester should encourage children to look at his mouth as he pronounces.

The child is to mark an "X" through the white circle if the two words are the same or an "X" through the dark or black circle if the two words are different.

The tester should proceed with the test items only when the children have demonstrated that they understand what is expected of them by doing the practice items.

PRACTICE ITEMS

P1. A BAT. A PAT (Different)

P2. THE BALL. THE BALL (Same)

P3. FEEL. FILL (Different)

P4. THE PLACE. THE PLAYS (Different)

P5. A DUCK. A DUCK (Same)

P6. A WISH. A WITCH (Different)

TEST

1. BED. BAD
2. THE WALL. THE WALL
3. THE SHOPPING. THE CHOPPING
4. A RAZOR. A RAZOR
5. THE YELLOW. THE JELLO
6. A VIEW. A FEW
7. THE WASHING. THE WASHING
8. THE ICE. THE EYES
9. THE MOUSE. THE MOUTH
10. THE DISHES. THE DITCHES
11. THEY. DAY
12. A JOB. A JOB

13. THE ROPE. THE ROBE
14. THE LEATHER. THE LETTER
15. PULL. POOL
16. THE WING. THE WING
17. THE BRIDGES. THE BREECHES
18. A SHEEP. A SHIP
19. BAD. BAT
20. VERY. BERRY
21. A DOG. A DOG
22. GRADE. GREAT
23. SAVE. SAFE
24. NOT. NUT
25. TEN. TEN
26. THE WATCH. THE WASH
27. THE DUCKS. THE DOGS
28. THINKING. SINKING
29. CHEAP. CHEAP
30. THE SHIP. THE CHIP

ANSWER SHEET

English________ Pronunciation________ Name of Child________________

Spanish________ Grammar______________ Class/Section________________

PRACTICE EXERCISES

P1. ○ ●

P2. ○ ●

P3. ○ ●

P4. ○ ●

P5. ○ ●

P5. ○ ●

TEST

1. ○ ●
2. ○ ●
3. ○ ●
4. ○ ●
5. ○ ●
6. ○ ●
7. ○ ●
8. ○ ●
9. ○ ●
10. ○ ●
11. ○ ●
12. ○ ●
13. ○ ●
14. ○ ●
15. ○ ●
16. ○ ●
17. ○ ●
18. ○ ●
19. ○ ●
20. ○ ●
21. ○ ●
22. ○ ●
23. ○ ●
24. ○ ●
25. ○ ●
26. ○ ●
27. ○ ●
28. ○ ●
29. ○ ●
30. ○ ●

IV.

ENGLISH COMPETENCE SERIES

GRAMMAR: Recognition of Gramatically Correct Sentences

Form A

INSTRUCTIONS

The tester is to read each sentence to the group and ask the children to indicate on their answer sheets if the sentence is right /good /correct or wrong /bad / incorrect. If a sentence is right the children are to draw an "X" through the first white circle and if the sentence is wrong the children are to draw an "X" through the second black (dark) circle. The tester will say each sentence only once. Emphasize if anything sounds wrong in a sentence that the entire sentence is wrong and should be so marked. Also, emphasize that a sentence may be true and still be wrong incorrect/bad, that is, a person who speaks English would not say it "that way".

The tester should proceed with the test items only when the children have demonstrated during the practice items that they understand what is expected of them. Correct or verify responses given by the children during practice and point out the specific errors of grammar in a sentence by pronouncing the sentence a second time, exaggerating the error, and then by pronouncing the sentence in a corrected form, saying "We don't say this in English that way. We say it this way."

The tester should practice saying the sentences before the test so that he can pronounce them easily and naturally during the test. The grammatically incorrect sentences are likely to be most difficult to pronounce with natural intonation. The tester should be particularly careful not to give away the wrong sentences by pronouncing them in a halting, hesitating or exaggerated manner.

PRACTICE ITEMS

P1. THE MAN HAS SHOES ON BOTH OF HIS FOOTS. (Incorrect: "The man has shoes on both of his feet.")

P2. IS ROUND A CIRCLE? (Incorrect: "Is a circle round?")

P3. SHE'S A TALL WOMAN. (Correct)

P4. THEY LIKES TO SING SONGS. (Incorrect: "They like to sing songs.")

P5. THE BOY IS ABSENT TODAY. (Correct)

P6. THE TREE IS MORE TALL. (Incorrect: "The tree is taller.")

TEST

1. SHE NO IS HERE.
2. HE RIDES HIS BICYCLE.
3. THEY HAVE TWO DOGS BIGS.
4. THE BOYS PLAY BASEBALL.
5. THE HORSE IS MORE BIG.
6. THE WOMAN IS TEACHER.
7. IS A LIBRARY IN OUR SCHOOL.
8. THE MR. JONES IS OUR FRIEND.

9. HE CATCHED THE BALL WITH HIS HAND.

10. MARY IS PRETTIER THAN GLORIA.

11. HE DRIVE AN OLD CAR.

12. THEY WANT GO.

13. IS BIG THE HOUSE?

14. WHEN DOES THE SCHOOL BUS COME?

15. MOTHER WASHES THE DISHES.

16. SHE LIVES IN THE STREET ALAMO.

17. HE WANTS TO LEAVE NOW.

18. SHE EATS BREAKFAST EVERY MORNING AT SEVEN.

19. THE BOY CRIED WHEN HE HURT THE FINGER.

20. THEY LIVE ON WASHINGTON STREET NOW.

21. WHERE LIVES THE TEACHER?

22. WE GO TO SCHOOL IN THE MORNING.

23. THE BOY HAS EIGHT YEARS.

24. HE WAS GIVEN A NEW BICYCLE.

25. THE GIRL CAN"T SWIM VERY WELL, CAN SHE.

26. WE TRIED TO TOLD YOU YESTERDAY.

27. HE'LL DO HIS HOMEWORK IF HE CAN.

28. TWO MOUSES RAN ACROSS THE FLOOR.

29. THEY CAN SPEAK THE ENGLISH VERY WELL.

30. WHERE IS YOUR BOOK?

V.

ENGLISH COMPETENCE SERIES

ORAL VOCABULARY

FORM A

INSTRUCTIONS

Say the names of the two or three things indicated for each row of pictures and have the children mark the picture of each thing named with a pencil or crayon. The child can mark with an "X". Pronounce each word and then pause for the child to find and mark the appropriate picture before proceeding to the next word in the series. Repeat at least twice the number of the item (corresponding to a row of pictures on the child's answer sheet) and periodically check to see if the children are marking on the appropriate row. Do not proceed with the test items until the children have demonstrated that they understand, by means of the practice items, what is expected of them.

PRACTICE EXERCISES

P1. Bicycle. Dog.

P2. Horse. Book. Hand.

TEST

1. Key. Spoon.
2. Comb. Box.

3. Towel. Tie.

4. Foot. Drum.

5. Broom. Glass.

6. Pear. Fish.

7. Envelope. Ruler.

8. Flag. Leaf.

9. Belt. Saw.

10. Bucket. Mouse. Cow.

11. Watch. Ring. Desk.

12. Shoe. Elephant. Shovel.

13. Money. Stamps. Brush.

14. Umbrella. Hat. Firewood.

15. String. Cup. Knife.

16. Iron. Telephone. Radio.

17. Egg. Meat. Apple.

18. Hammer. Pliers. Screwdriver.

19. Bus. Car. Train.

20. Nurse. Waitress. Secretary.

21. Carpenter. Policeman. Soldier.

22. Turkey. Chicken. Bear.

23. Duck. Rabbit. Kitten.

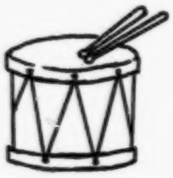
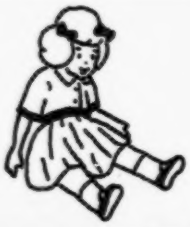
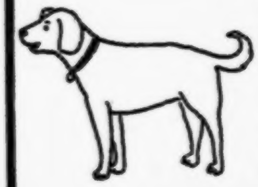
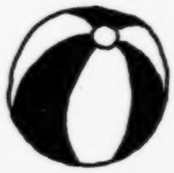
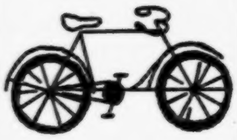
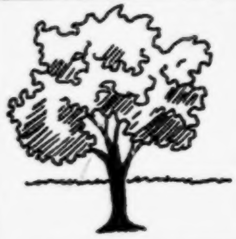
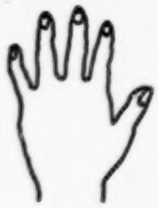
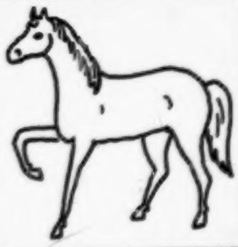
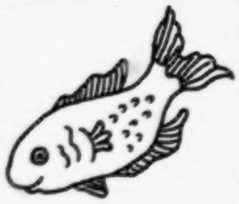
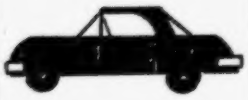
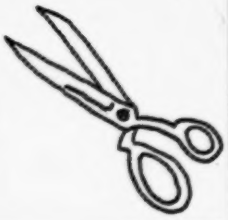
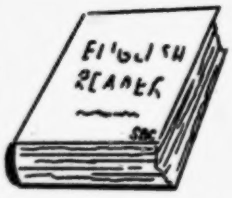
24. Worm. Fly. Spider.

VOCABULARY   NAME______________________

ENGLISH__________   CLASS______________________

SPANISH__________

PRACTICE TEST

P1.						
P2.						 ENGLISH READER

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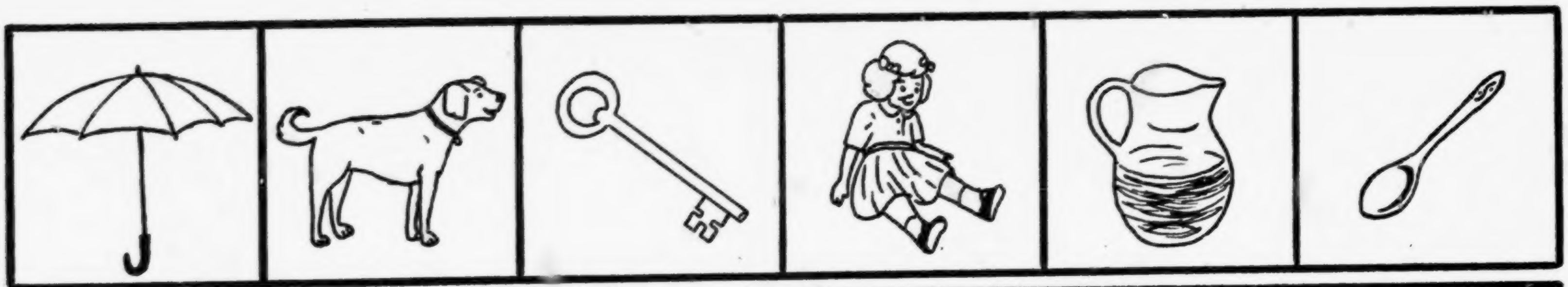

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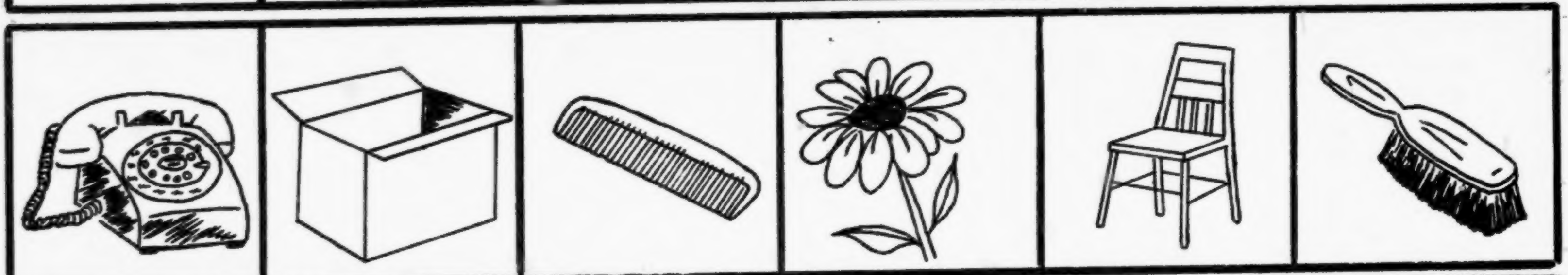

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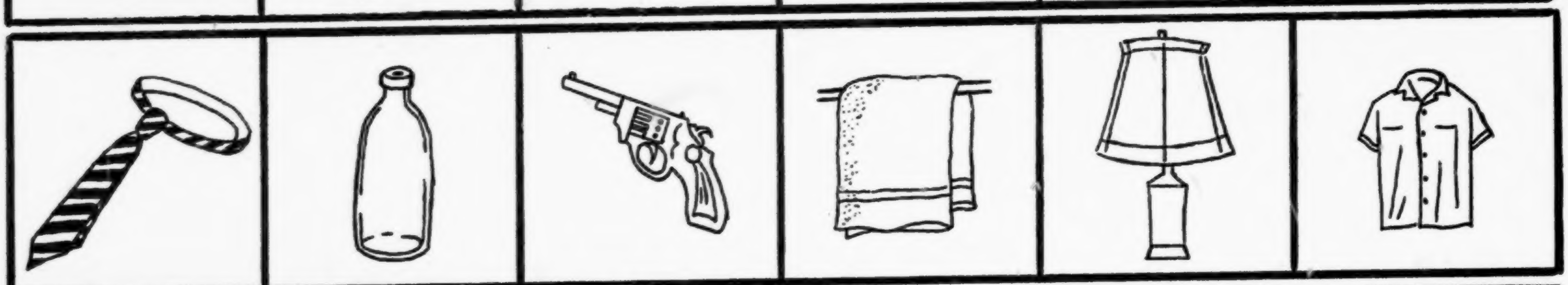

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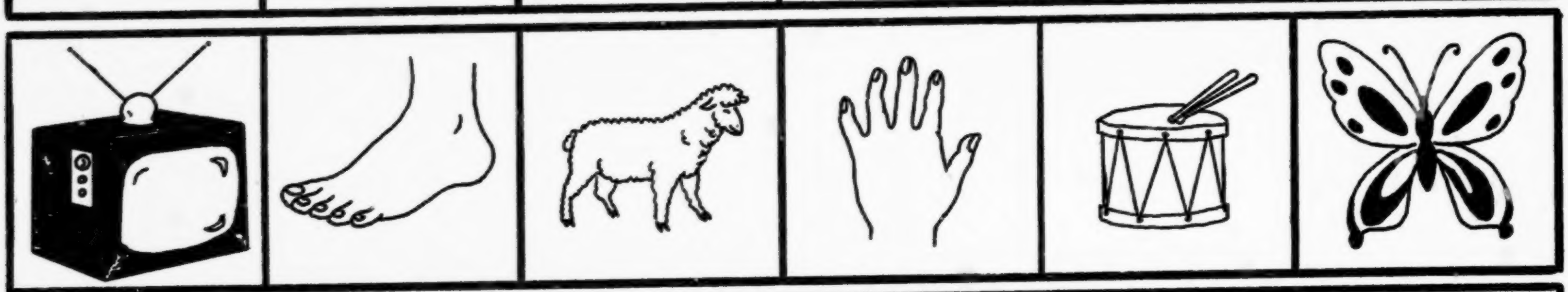

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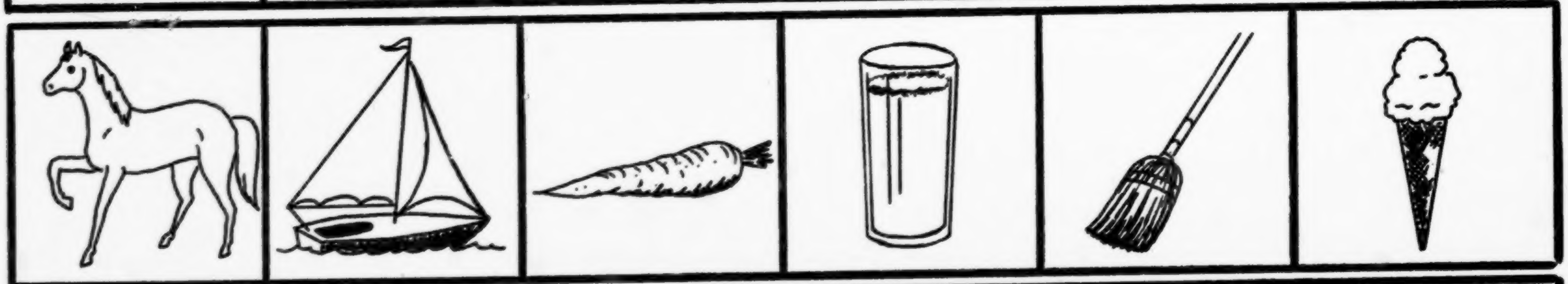

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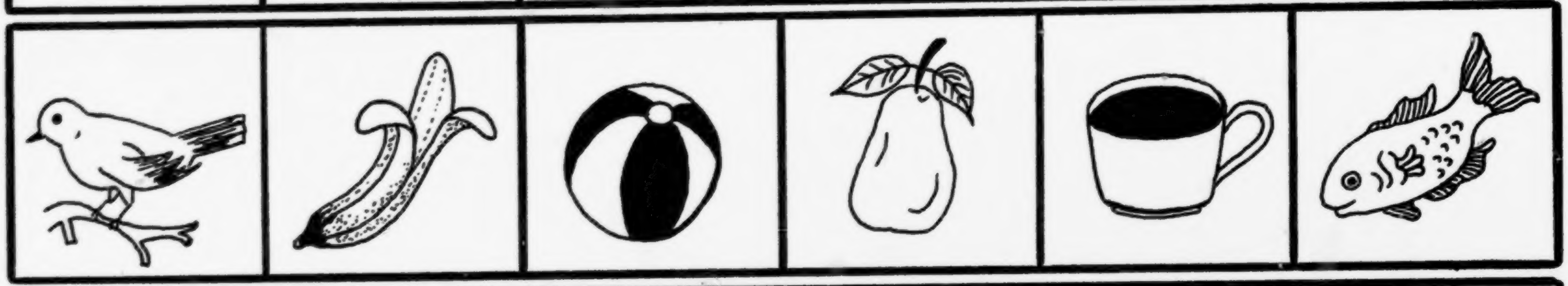

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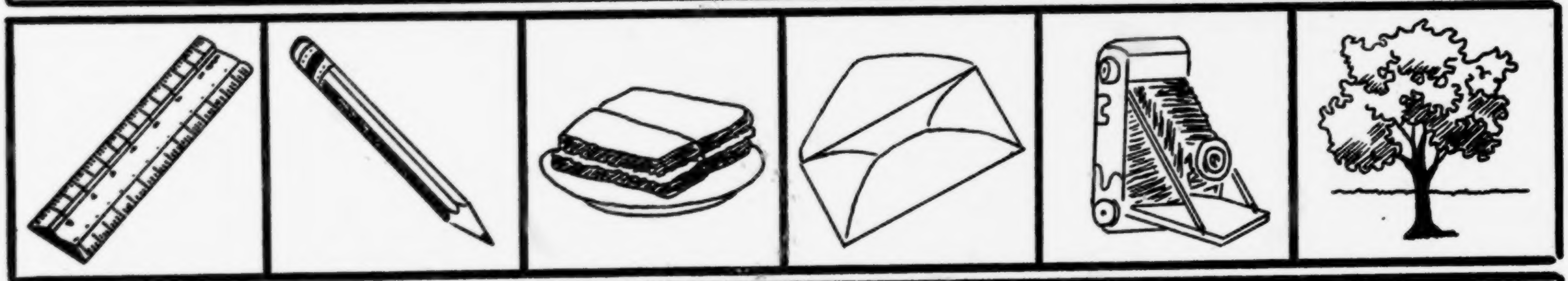

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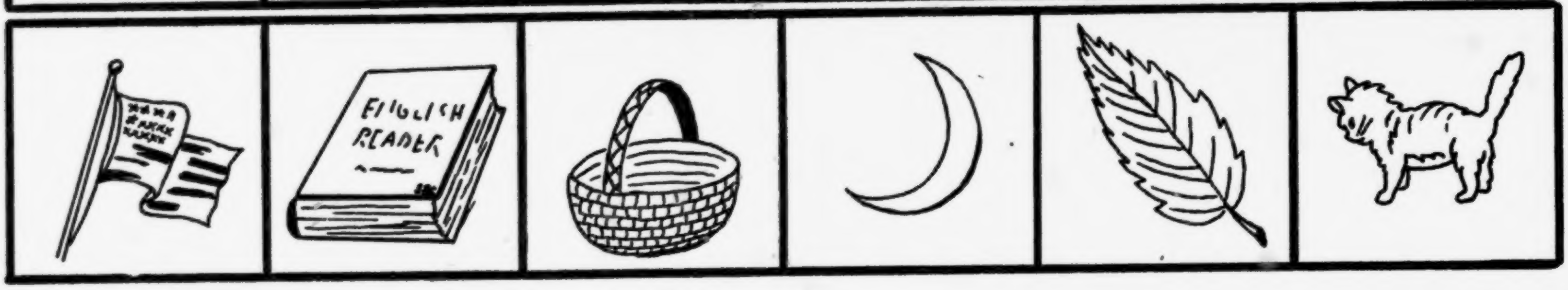
ENGLISH READER

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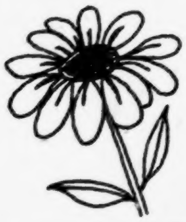
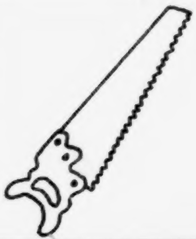
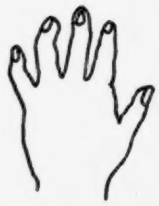
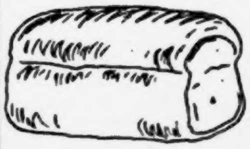
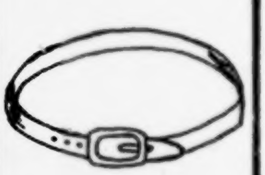
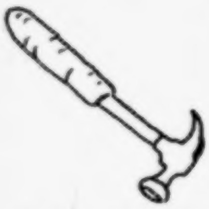

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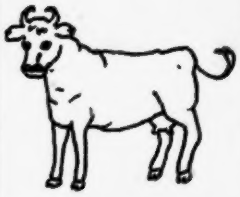
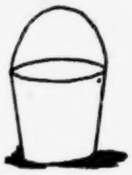
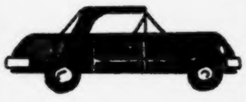
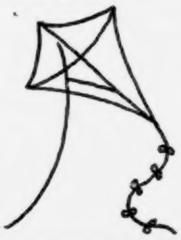
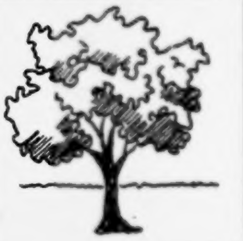
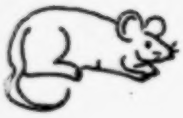

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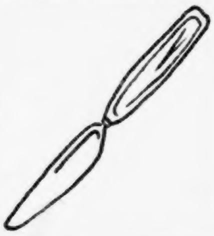
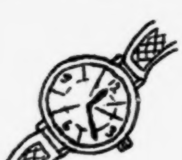
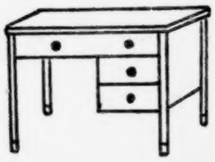
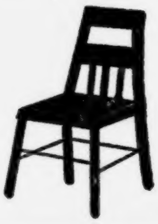
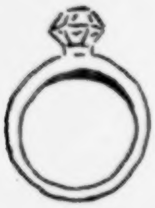
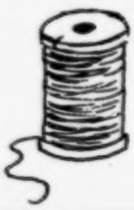

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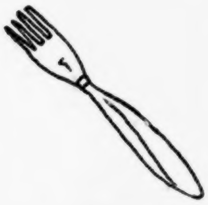
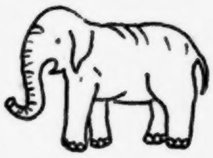
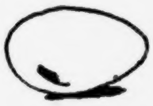
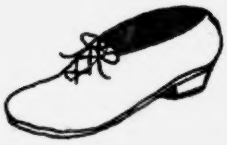
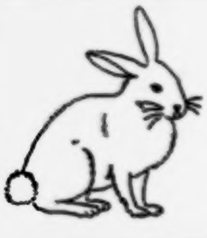
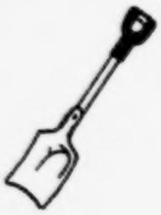

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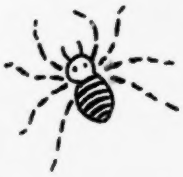
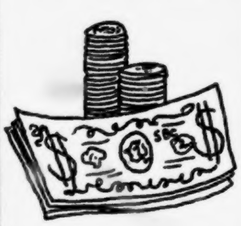
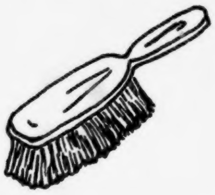
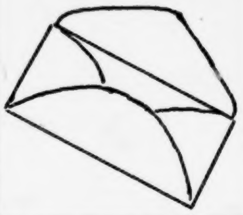
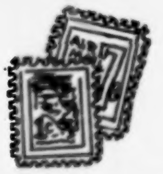
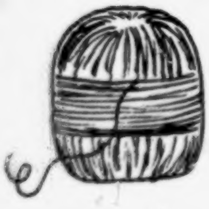

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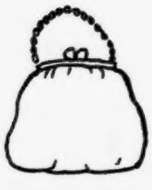
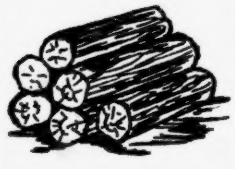
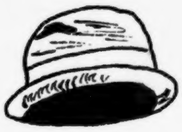
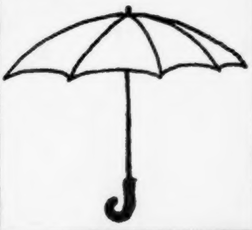
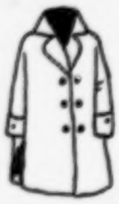
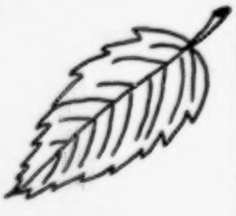

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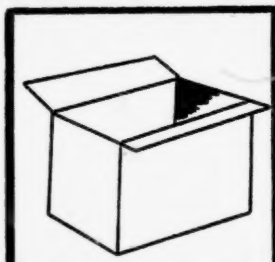
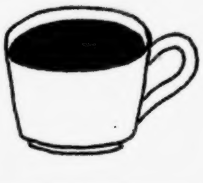
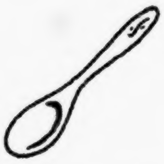
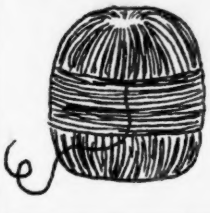
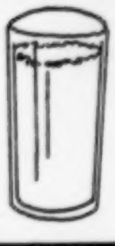
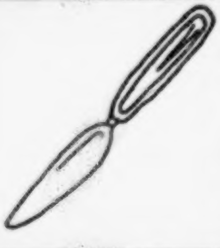

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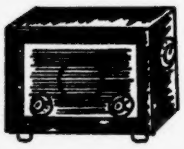
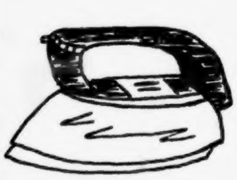
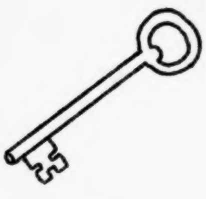
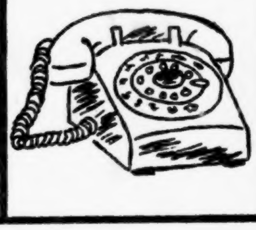
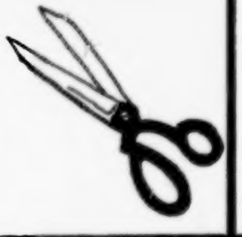
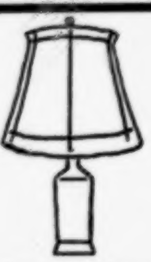

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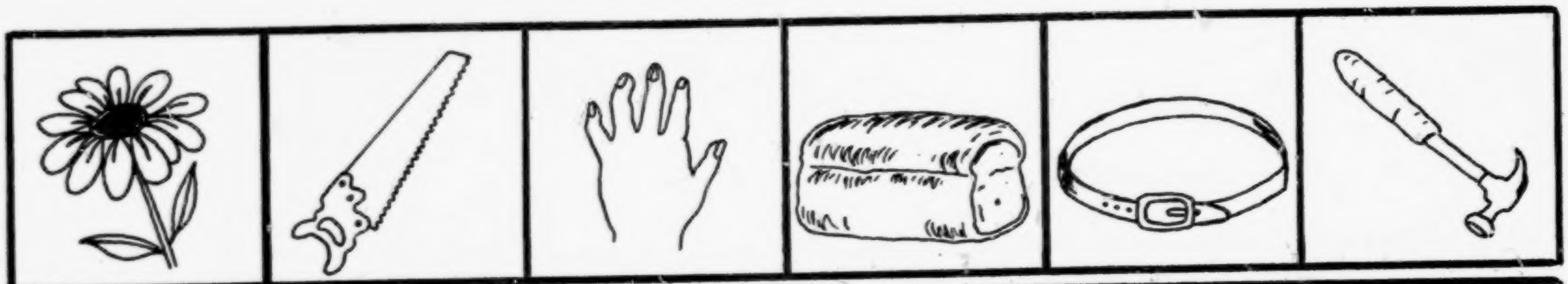

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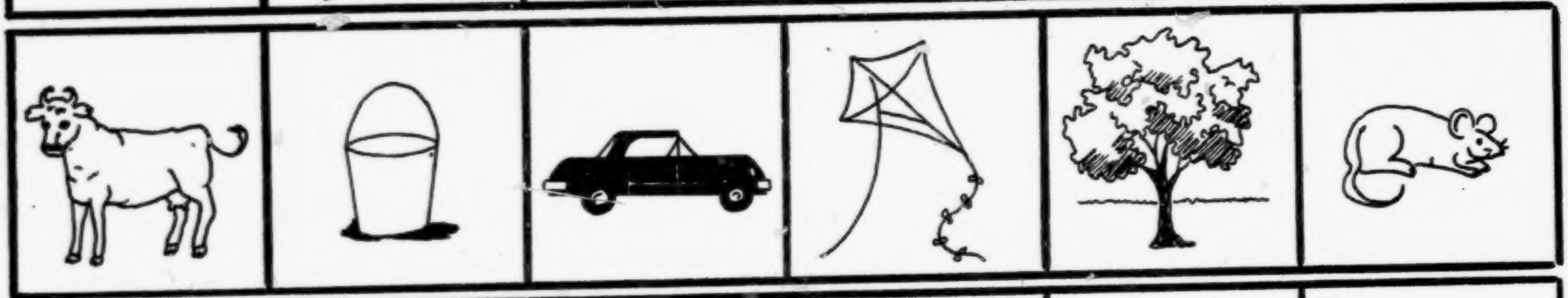

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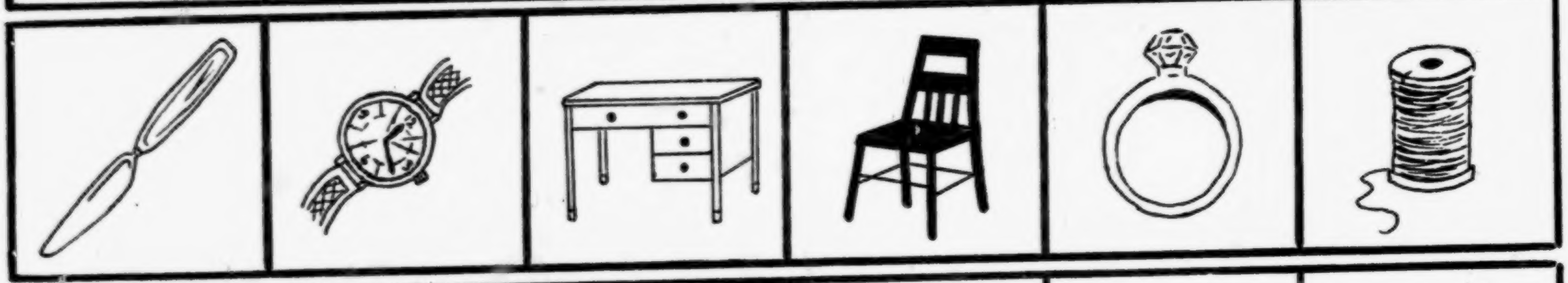

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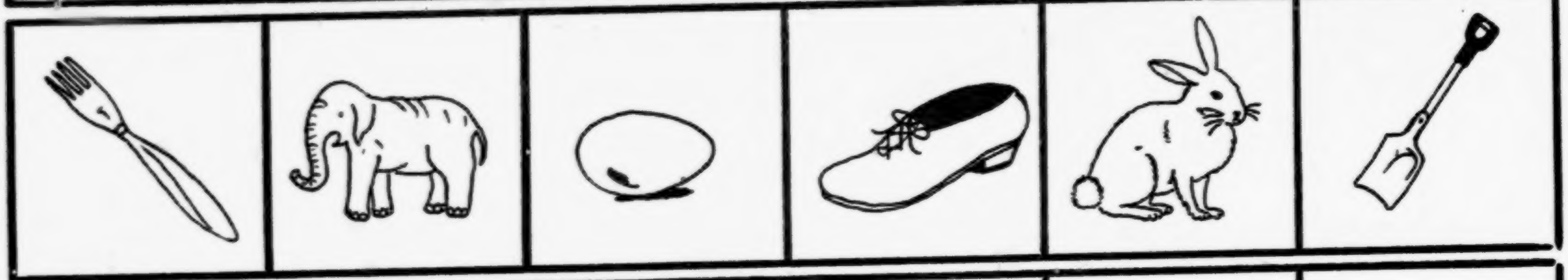

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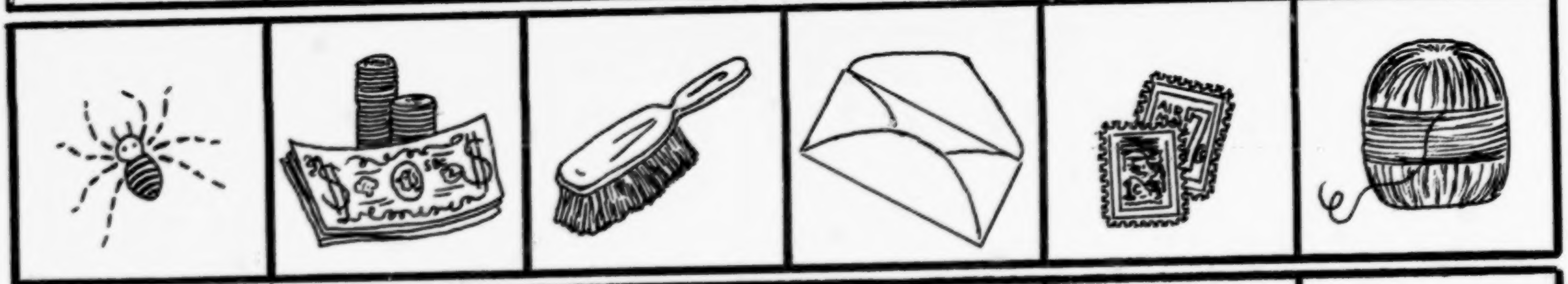

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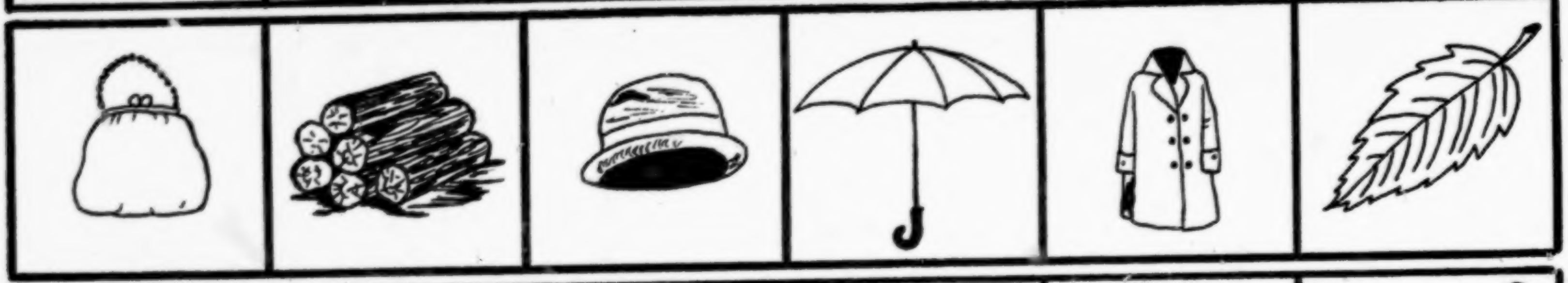

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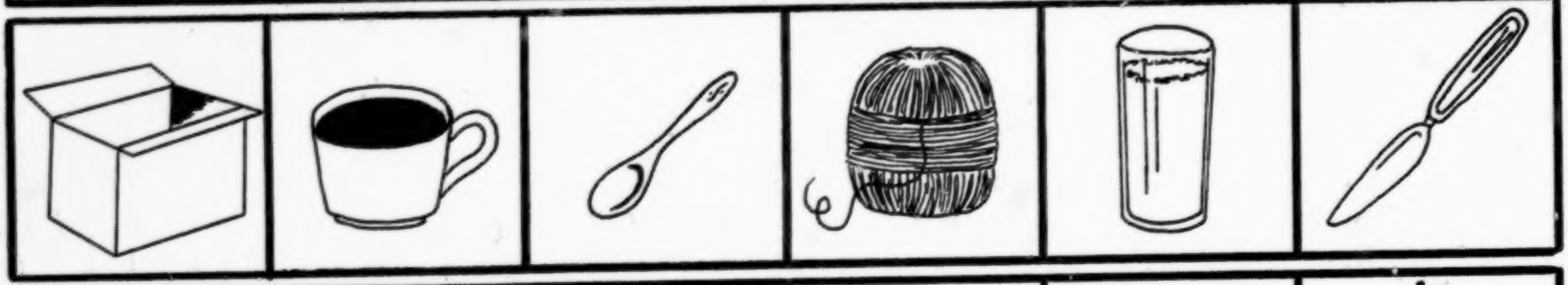

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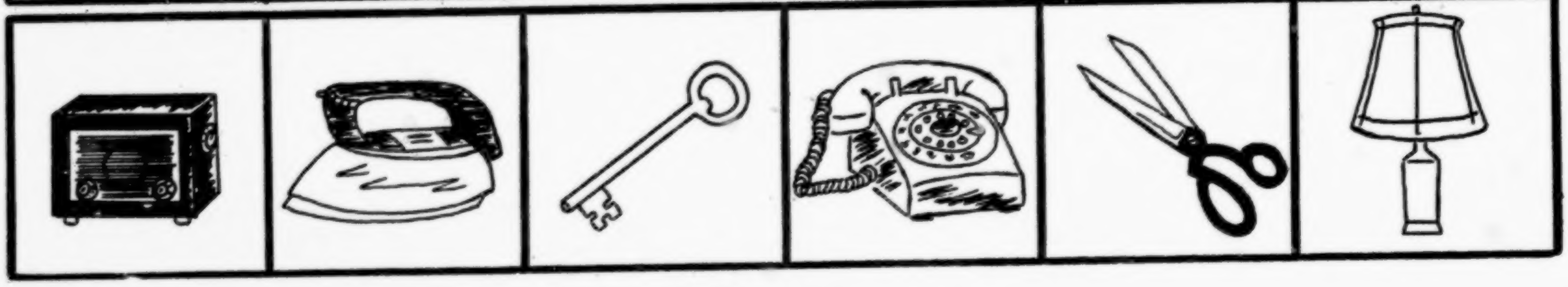
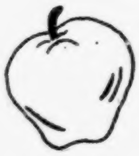
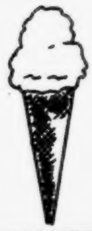
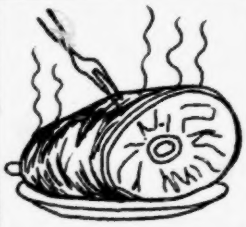
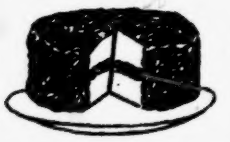
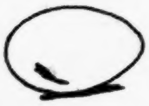
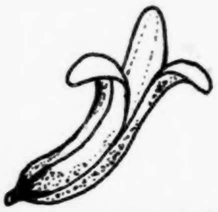
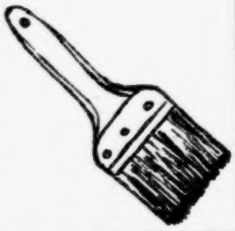
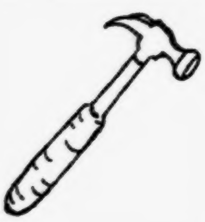
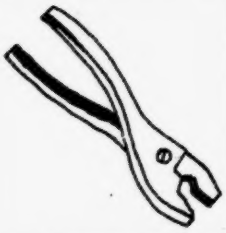
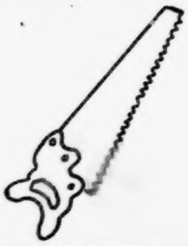
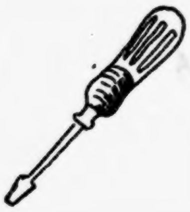
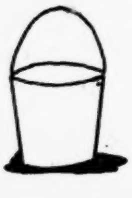
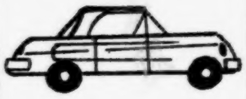
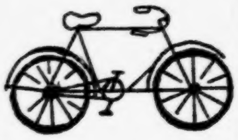
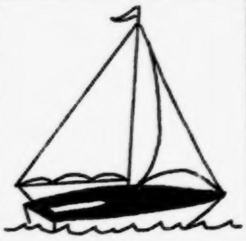
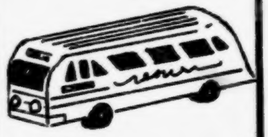
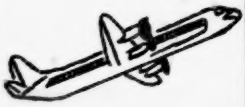
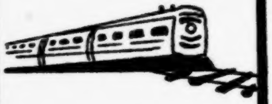
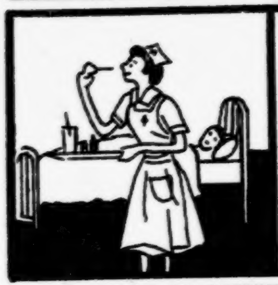
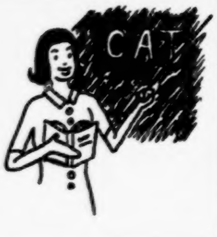
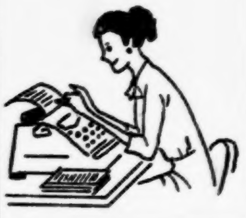
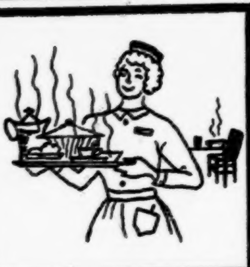
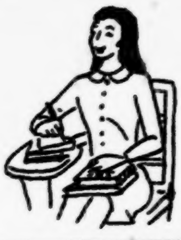
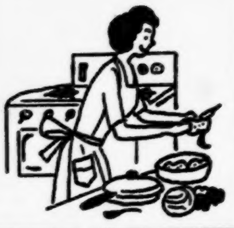
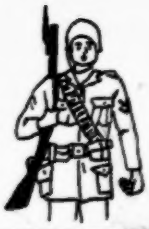
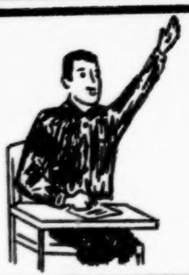
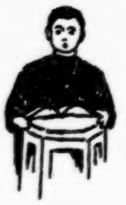
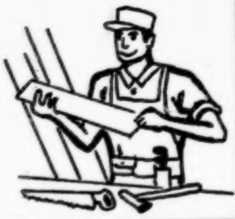
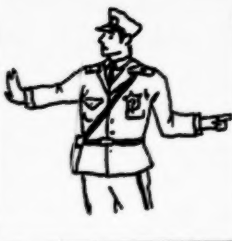
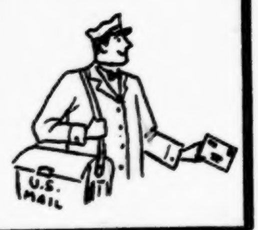
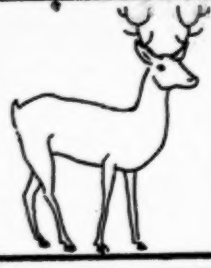
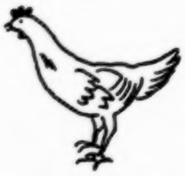
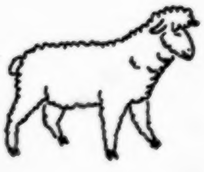
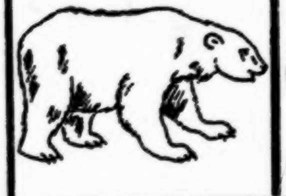
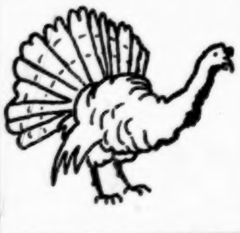
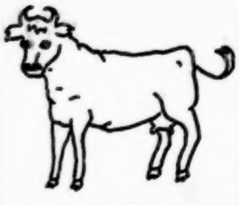
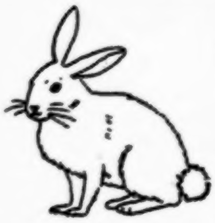
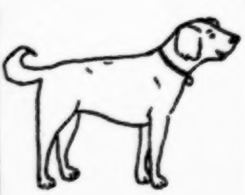
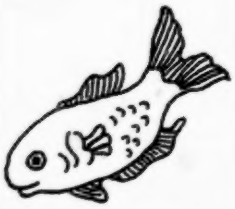
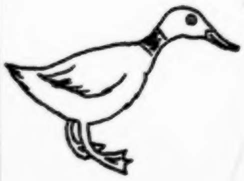
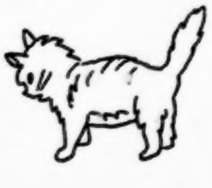
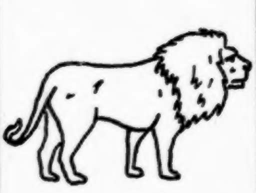
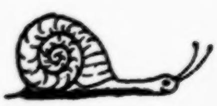
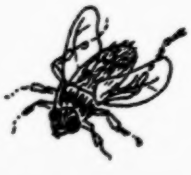
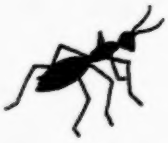
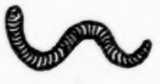
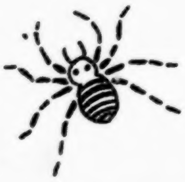
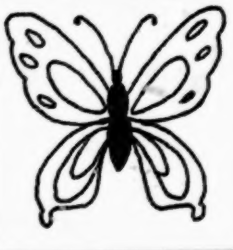


17.						
18.						
19.						
20.						
21.						
22.						
23.						
24.						

VI.

ENGLISH COMPETENCE SERIES

LISTENING COMPREHENSION OF CONNECTED UTTERANCES

FORM A

INSTRUCTIONS

Read each riddle and also the three answers or solutions to each riddle out loud. Instruct the children to mark an "X" through the picture which is the correct solution or answer to each riddle.

PRACTICE EXERCISES

P1. It can fly.
It can sing.
It walks on two legs.
What is it?

a rabbit   a bird   a butterfly

P2. It is easy to break.
We eat it for breakfast.
We get it from hens.
What is it?

a glass   a feather   an egg

TEST

1. It shines in the day time.
It goes away at night.
What is it?

a lamp   the sun   the moon

2. It is made of metal.
   We use it to eat.
   What is it?

   a dish a napkin a fork

3. It is made of glass.
   You can see yourself in it.
   What is it?

   a mirror a cup a picture

4. You can hear it.
   You can feel it.
   But you cannot see it.
   What is it?

   the wind the rain the sun

5. It is made of cloth.
   Men and boys wear it.
   It goes around the neck.
   What is it.

   a hat an apron a tie

6. It is an animal.
   It is smaller than a horse.
   It gives us wool.
   What is it?

   a sheep a dog a duck

7. It is made of metal.
   It fits in your hand.
   It has two sharp points.
   We use it to cut paper.
   What is it?

   a pen a knife scissors

8. It is long and straight.
   You can find it in the classroom.
   We use it to measure.
   What is it?

   a ruler a pencil a stick

9. It uses electricity.
It gives off light.
We can turn it off and on.
What is it?

a bell an iron a lamp

10. They are small and green.
They grow on trees.
When they fall off they turn brown.
What are they?

flowers branches leaves

11. It has two wheels.
Children like to ride on it.
It has no motor.
What is it?

a car a bicycle a tricycle

12. He works outside.
He uses a hammer and saw.
He builds houses.
Who is he?

a carpenter a policeman a farmer

13. It is flat like a wall.
You find one in every classroom.
Children can write on it with chalk.
What is it?

a notebook a blackboard a desk

14. It can fly.
It is bigger than a bird.
People can ride in it.
What is it?

a train an airplane a cloud

15. You find him at the circus.
He has a funny, painted face.
He likes to make children laugh.
Who is he?

a clown   a donkey   a lion

16. It is smaller than a bird.
It can fly.
It has many colors.
What is it?

a butterfly   an ant   a sparrow

17. It is small.
It is made of metal.
We use it to open doors.
What is it?

a knife   a saw   a key

18. It is long and narrow.
Bridges are built over it.
We can cross it in a boat.
What is it?

the ocean   a mountain   a river

19. You see it in the sky.
It is usually white like cotton.
Rain comes from it.
What is it?

a cloud   the sun   a rainbow

20. Women and girls wear it.
It is easy to take off and put on.
It is used in the kitchen.
What is it?

a dish   an apron   a hat

LISTENING COMPREHENSION

NAME____________________________

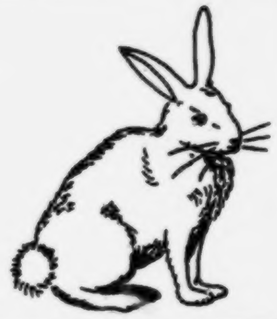
ENGLISH________________

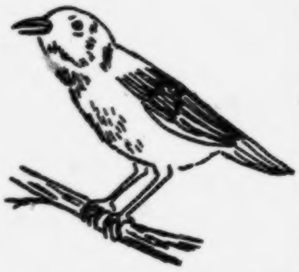
CLASS____________________________

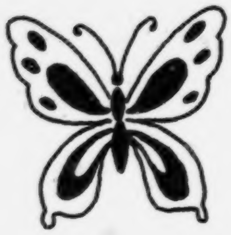
SPANISH________________

PRACTICE EXERCISES

P1.







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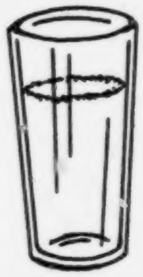

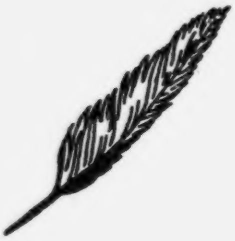

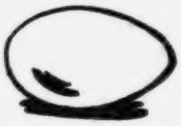

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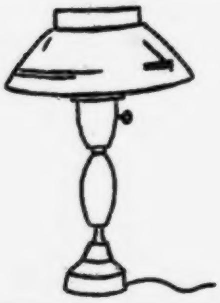
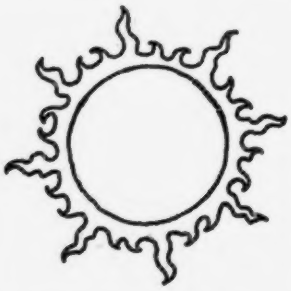
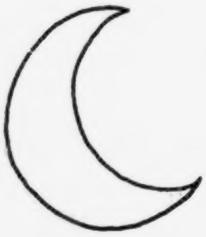

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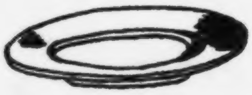
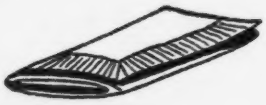
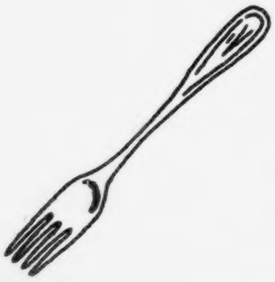

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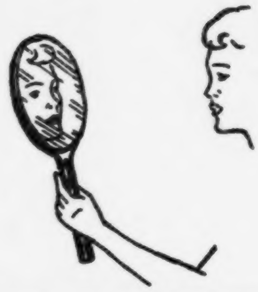
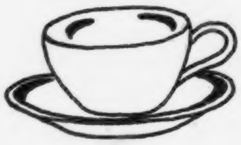
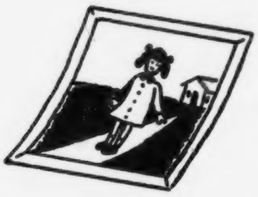

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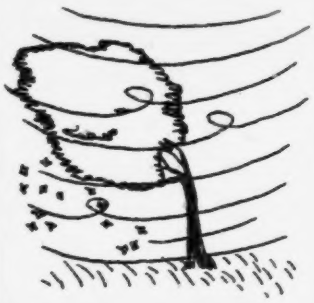
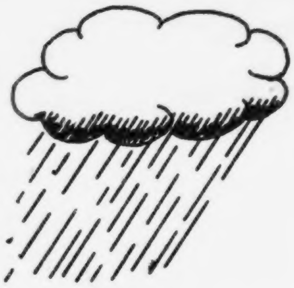
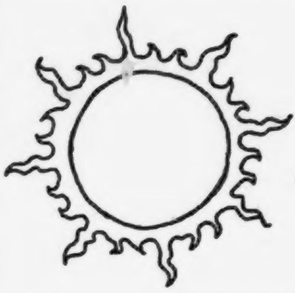

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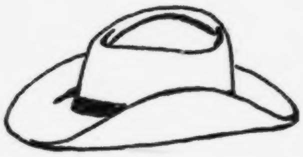
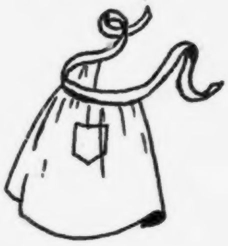
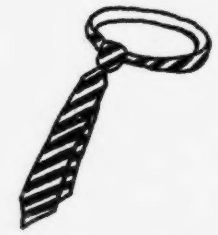

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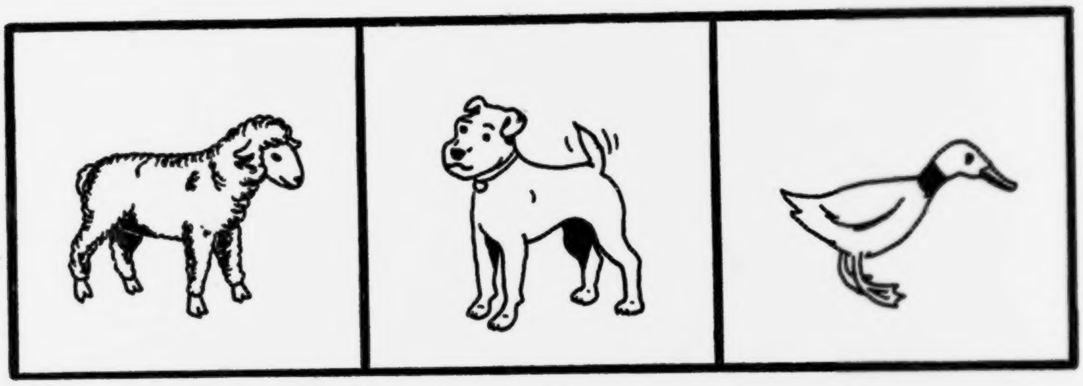

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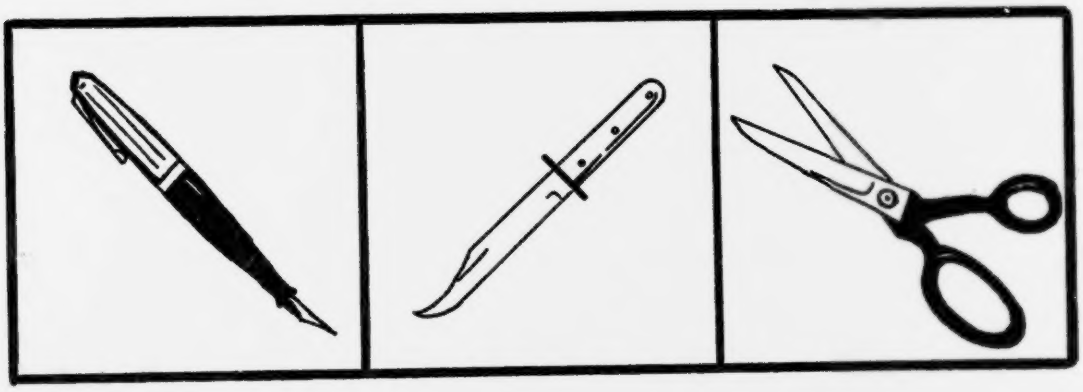

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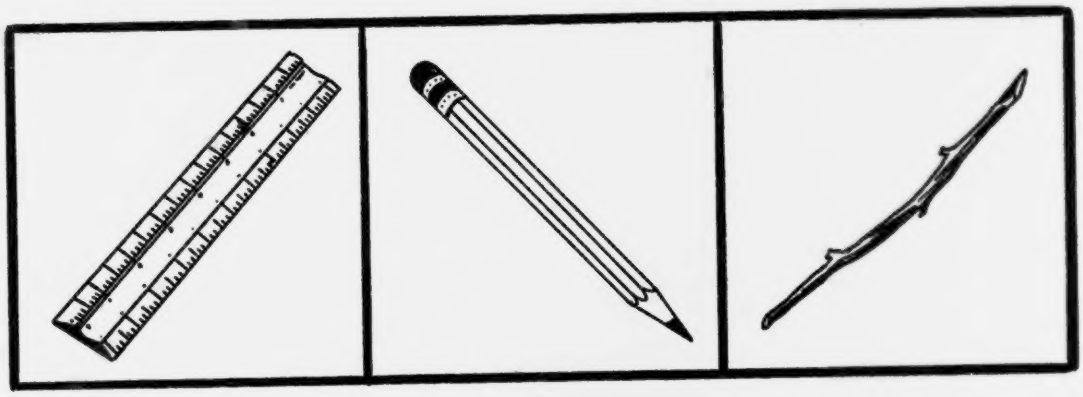

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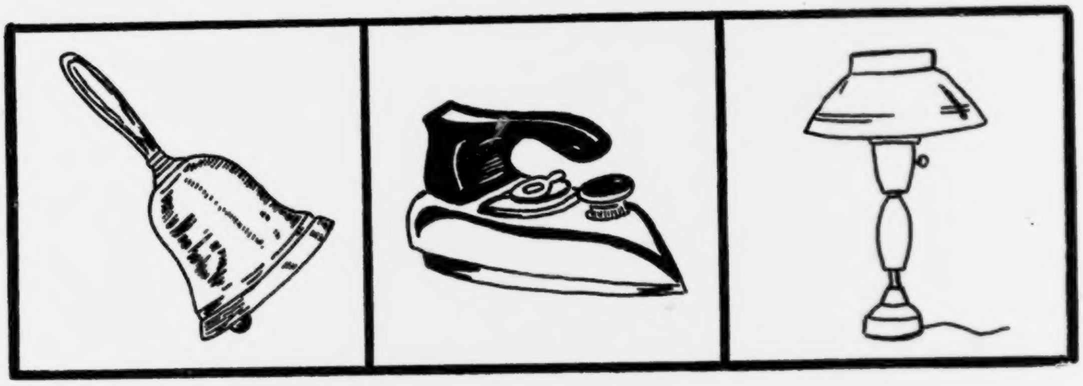

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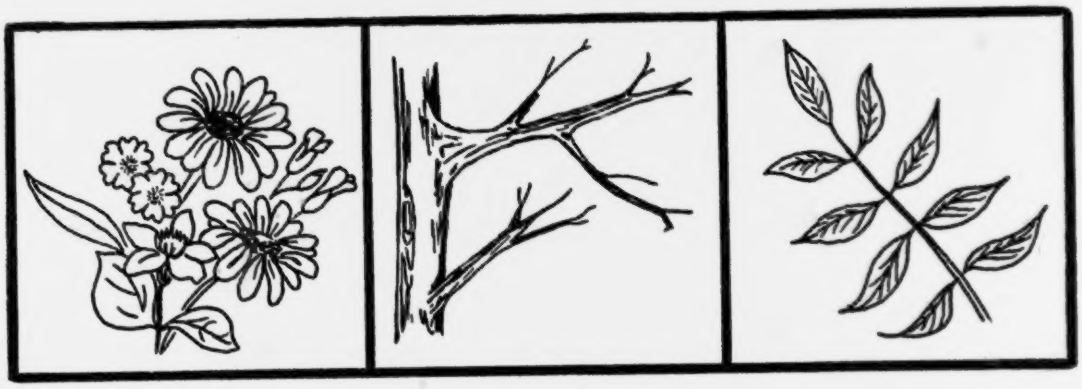

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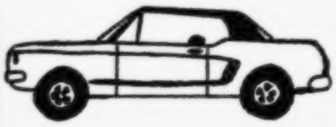

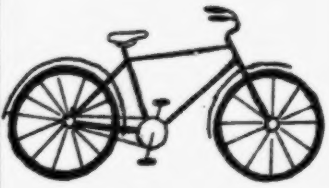

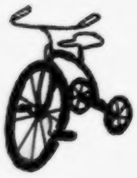

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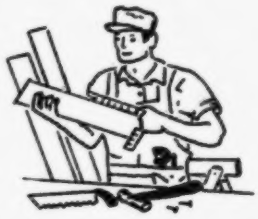

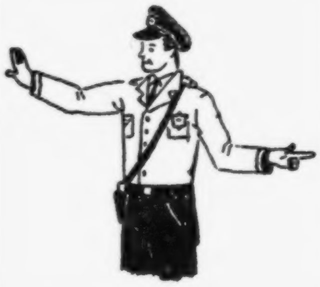

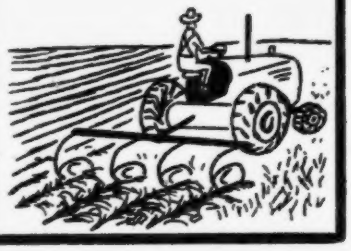

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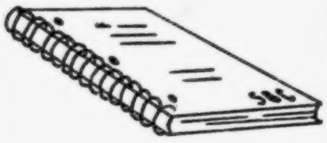

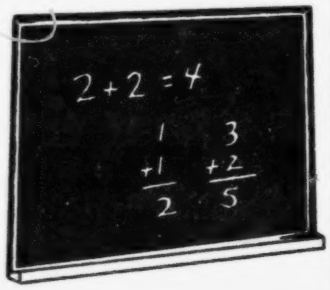

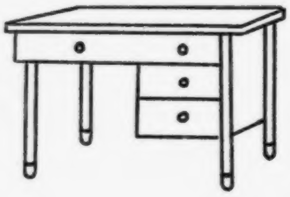

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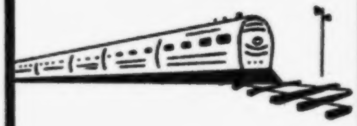

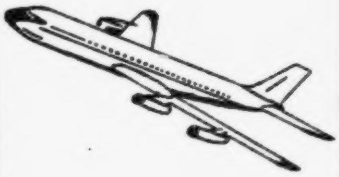

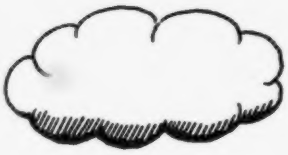

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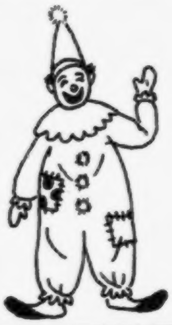

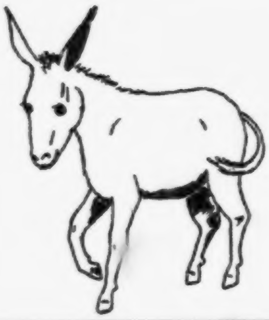

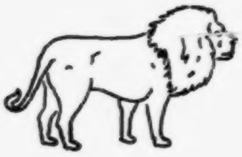

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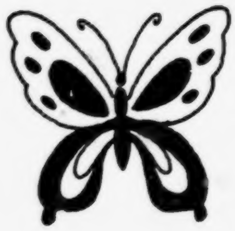

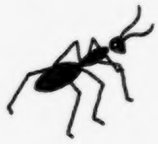

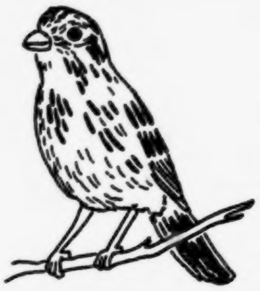

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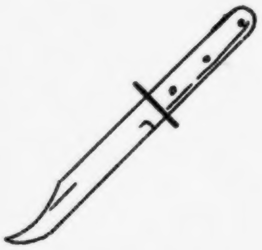

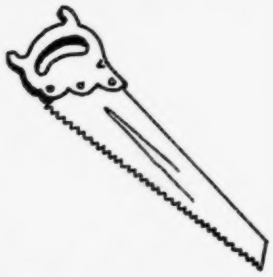

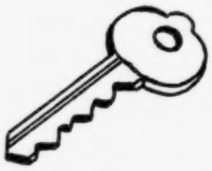

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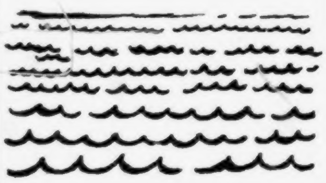

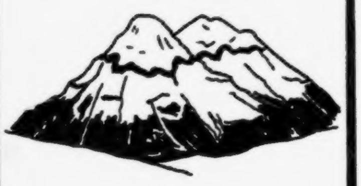

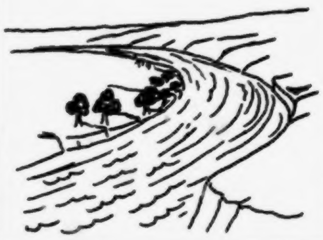

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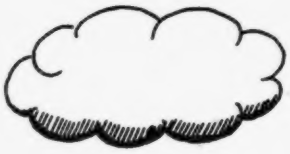

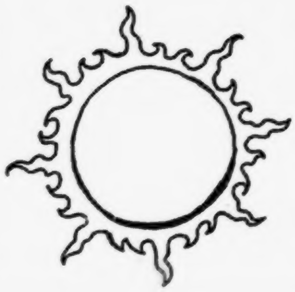

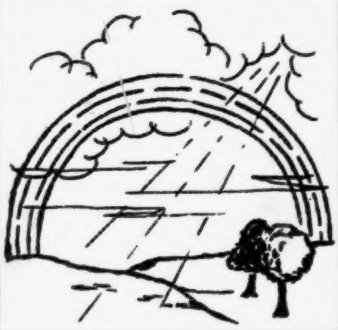

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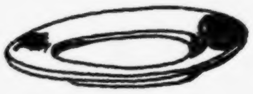

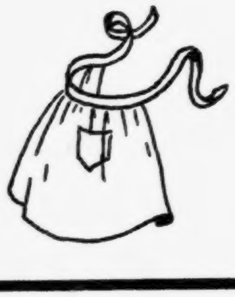

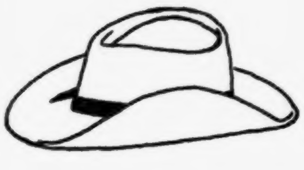

I.

SPANISH COMPETENCE SERIES

RECOGNITION OF QUESTION AND IMPERATIVE PATTERNS

FORM A

INSTRUCTIONS

This is a test of the child's ability to recognize the various types of questions and commands in Spanish. The language employed is simple, common, and within the range of English-speaking children with some contact with Spanish. More than a measure of the knowledge of specific language items and sentences, it is an index of the child's familiarity with the basic interrogative and imperative patterns of Spanish. It is possible on this test that the child can, in some cases, respond appropriately without actually comprehending the specific content of a question, e.g., by responding to cues of intonation, word order, and function words. The child's recognition of these patterns will be judged by his verbal as well as non-verbal (i.e. gestural and interjectional) responses. The criteria for making particular judgments of "appropriateness" of response will be supplied for each question or command.

This test is to be administered by means of an individual interview with the child.

Items on the test are to be scored on the separate answer sheet by the interviewer as "R" (right or appropriate) or "W" (wrong, inappropriate, no response). Criteria are supplied for scoring a response as right or appropriate, all other responses are to be scored "wrong". In some cases the interviewer should use his own discretion in scoring. Remember, that for a child's response to be scored right or appropriate, it need only indicate that he has understood the basic type of question or command. Thus, his response might be factually wrong, grammatically incorrect, or employ social unacceptable forms in Spanish and still be scored as "right or "appropriate".

The interviewer should in all cases accept and score the child's first response unless the child changes his first response spontaneously, in which case the child's second response is to be scored. The interviewer should not repeat any question or direction unless the child spontaneously signals by means of word, interjection or gesture that he did not hear or that he wants the interviewer to repeat. The child may, for example, indicate a desire for repetition by saying, "¿Qué dijo?"; "¿Cómo?"; "¿Qué?"; "¿Mande?"; "¿Lo siento pero no oí (entendí)."; "¿Eh?"; etc. The child may also signal a desire for repetition by means of body movement and gesture, for example, by turning an ear toward the interviewer.

PRACTICE EXERCISES

P1. ¿CÓMO TE LLAMAS?

Credit as right or appropriate a response consisting of first name only or first name and last name.

P2. ¿CUÁNTOS AÑOS TIENES?

Credit as right or appropriate any response which is a number or contains a number. Also credit as right if a number of fingers is held up.

P3. ¿TIENES HERMANOS Y HERMANAS?

Credit as right or appropriate any affirmative or negative expression, interjection or gesture.

P4. PREGÚNTAME A MÍ CÓMO ME LLAMO.

"¿Cómo se llama?"; "¿Cómo se llama Ud.?"; "¿Qué es su nombre?"; "¿Cuál es su nombre?"; etc.

"Bueno. Muy Bien."

"Ahora voy a hacerte algunas otras preguntas. Escúchame bien porque voy a decirlas solamente una vez. Contesta lo mejor que puedes."

TEST

1. ¿QUIÉN ES TU MEJOR AMIGO O AMIGA EN LA ESCUELA?

Any name or reference to a person.

2. ¿ERES UN NIÑO? (Substitute UNA NIÑA if child being interviewed is a girl.)

Any affirmative expression, interjection or gesture.

3. ¿ES EL AZÚCAR DULCE O ÁGRIO?

   Any expression containing "dulce".

4. ¿QUÉ TE GUSTA COMER MÁS DE TODO?

   Any indication of anything edible.

5. CUENTA HASTA CINCO PARA MÍ.

   Counting out loud to five or silent counting on fingers to five.

6. ¿ES ESTO LA NARIZ? (Interviewer holds his own ear.)

   Any negative expression, interjection or gesture.

7. ¿DÓNDE TE GUSTA JUGAR?

   Any reference to place.

8. ¿CUÁL ES MÁS GRANDE, UN GATO O UN CABALLO?

   Any expression which contains "caballo".

9. ¿SABES CORRER?

   Any affirmative expression, interjection or gesture.

10. DIME QUÉ SON DOS Y DOS.

    Any number spoken or a number of fingers held up.

11. ¿LES GUSTA A LAS NIÑAS JUGAR CON LAS MUÑECAS, ¿NO ES VERDAD?

    Any affirmative expression, interjection or gesture.

12. ¿TIENES OCHO AÑOS? (Use a different age from the one given in P2.)

    Any negative expression, interjection or gesture.

13. PREGÚNTAME SI YO TENGO UNA PLUMA.

    "¿Tiene una plume?"; "¿Tiene Vd. una pluma?'; "¿Tiene pluma?"; "¿Vd. tiene una pluma?"; etc.

14. ¿CUÁNTOS DÍAS HAY EN LA SEMANA?

    Any number spoken or any number of fingers held up.

15. ¿ESTÁN CERRADOS LOS OJOS? (Interviewer's eyes are closed.)

    Any affirmative expression, interjection or gesture.

16. ¿ES UN LAPIZ HECHO DE MADERA O PAPLEL?

    Any expression which contains "madera."

17. ¿ES HOY EL MARTES? (Substitute the correct day of the week.)

    Any affirmative expression, interjection or gesture.

18. DIME A MÍ "GRACIAS."

    "Gracias."

19. ¿ES UN TREN MÁS LARGO QUE UN CAMIÓN?

    Any affirmative expression, interjection or gesture.

20. DIME QUE MIRE A MI RELOJ.

    "Mire a su reloj."; etc.

21. ¿TIENE EL CONEJO OREJAS LARGAS, ¿VERDAD?

    Any affirmative expression, interjection or gesture.

22. ¿TE GUSTARÍA TOMAR LA LECHE O EL AGUA?

    Any expression which contains "leche" or "agua" but not both words.

23. ¿VIENE LA NAVIDAD EN SEPTIEMBRE?

    Any negative expression, interjection or gesture.

24. ¿CUÁL DÍA SE SIGUE EL VIERNES?

    "Sabado."

25. DIME QUE ESTÁS HACIENDO AHORITA MISMO.

Any reasonable reference to what the child is doing at the moment, e.g., "sentado contestando las preguntas, hablando con Vd., mirando a Vd." etc.

II

SPANISH COMPETENCE SERIES

COMPREHENSION OF COMMANDS AND DIRECTIONS

FORM A

INSTRUCTIONS

This is a test of a child's ability to comprehend specific commands and directions in Spanish. The interviewer asks the child to perform certain actions and his comprehension of the language used by the interviewer is judged by the action the child performs. The child is not required to say anything.

The child's responses are to be scored on the separate answer sheet as "R" (right or "W" (wrong, no response). A response is to be scored right if the child performs the precise action called for thus demonstrating that he has understood the specific direction or command of the interviewer.

The test is to be administered by means of an individual interview with the child.

The interviewer should in all cases accept and score the the child's first response unless the child changes his first response spontaneously, in which case the child's second response is to be scored. The interviewer should not repeat any command or direction unless the child spontaneously signals by means of word, interjection or gesture that he did not hear or that he wants the interview to repat. The child may, for example, indicate a desire for repetition by saying, "¿Qué dijo?"; "¿Cómo?"; "¿Qué?"; "¿Mande?"; "¿Eh?"; etc. The child may also signal a desire for repetition by means of body movement and gesture, for example, by turning an ear toward the interviewer.

After the interviewer and child are seated facing one another, the interviewer should say to the child, "Ahora vamos a jugar una clase de juego. Voy a decirte que hagas algo y tu tratas de hacerlo. Tienes que escuchar bien porque voy a decir todo solamente una vez."

PRACTICE EXERCISES

P1. LEVANTA LA MANO.

P2. APUNTA EL TECHO.

P3. TÓCATE EL PIE.

P4. PONTE DE PIE.

"Bueno. Muy Bien. Hacemos algunos otros. Escucha con cuidado. Voy a decir cada cosa solamente una vez."

TEST

1. MUEVE LA CABEZA.
2. DAME LA MANO.
3. CIERRA LOS OJOS.
4. CÚBRETE LAS OREJAS CON LAS MANOS.

5. TÓCATE LA NARIZ.

6. PÉGATE LA RODILLA.

7. MIRA DEBAJO DE TU SILLA.

8. MUÉSTRAME LA PALMA DE LA MANO.

9. ENSÉÑAME DONDE ESTÁ TU CORAZÓN.

10. MUEVE LA MANO DE ARRIBA ABAJO.

11. PON LAS MANOS DETRÁS DE TI.

12. PONTE DE PIE Y DA UNA VUELTA. (Ask child to sit down again.)

13. ABRE LA BOCA.

14. ENSÉÑAME EL CODO.

15. A PUNTA LOS DIENTES.

16. LEVANTA LA MANO IZQUIERDA.

17. VOLTEA LA CABEZA Y MIRA SOBRE TU HOMBRO.

18. LEVANTA LOS PIES DEL PISO.

19. DILE ADIÓS CON LA MANO A ALGUIEN.

20. PONTE DE PIE Y CAMINA UN RATO. (Ask child to sit down again.)

21. PRETENDE QUE ESTÁS LEYENDO UN LIBRO. (Explain "pretender" to the child.)

22. PRETENDE QUE ESTÁS MANEJANDO UN CARRO.

23. PRETENDE QUE ESTÁS TOCANDO UN PIANO.

24. PRETENDE QUE TE ESTAS SECANDO LAS MANOS CON UNA TOALLA.

25. PRETENDE QUE ESTÁS TIRANDO UNA PELOTA.

III.

SPANISH COMPETENCE SERIES

PRONUNCIATION: Sound Discrimination

FORM A

INSTRUCTIONS

The tester is to pronounce each pair of words and ask the children to determine if the two words sound exactly the SAME (or if the two words mean the SAME thing) or sound DIFFERENT in some way (or mean different things). The tester should say each pair of words only once. The tester should be very careful to pronounce the two words with the same falling intonation. This can be best accomplished by pronouncing each word as a separate phrase and not pronouncing the pair of words as two items in sequence. The period (.) after the first word in each pair is to remind the tester that he is to make a full stop (falling intonation) between the two words. Also, the tester should be careful to pronounce each word normally and naturally and without exaggerating his pronunciation. The tester should be especially careful not to exaggerate the difference in a pair of different words. The tester should encourage the children to look at his mouth as he pronounces the two words.

The child is to mark an "X" through the white circle if the two words are the same or an "X" through the dark or black circle if the two words are different.

The tester should proceed with the test items only when the children have demonstrated that they understand what is expected of them by doing the practice items.

PRACTICE ITEMS

P1. EL PISO. EL PESO (Different)

P2. LAS SEÑORAS. LAS SEÑORAS (Same)

P3. LA PALA. LA BALA (Different)

P4. TÍA. DÍA (Different)

P5. EL CARRO. EL CARRO (Same)

P6. BOTA. BOTE (Different)

TEST

1. LA BRISA. LA PRISA
2. EL CAMINO. EL CAMINO
3. DOS. TOS
4. CALOR. COLOR
5. VALLE. VALLE
6. PENA. PEINA
7. LA COMA. LA GOMA
8. UN RATO. UN RATO
9. PEÑA. PENA
10. TODO. TORO
11. ALUMNAS. ALUMNOS
12. CAMPAÑA. CAMPAÑA

13. EL CUERPO. EL CUERVO

14. PERRO. PERO

15. EL HUERO. EL HUERO

16. EL FAVOR. EL PAVOR

17. LA CARA. LA CARA

18. LOS HOMBRES. LOS HOMBROS

19. PAPAS. PAPÁS

20. UN VASO. UN VASO

21. PECES. VECES

22. HUERO. MERO

23. NIÑOS. NIÑAS

24. LOS TOROS. LOS TOROS

25. UN HUESO. UN BESO

26. LA MESA. LA MESA

27. TORO. TORO

28. RUIDO. RUDO

29. TENSO. DENSO

30. LOS PLANES. LOS PLANES

IV.

SPANISH COMPETENCE SERIES

GRAMMAR: Recognition of Grammatically Correct Sentences

FORM A

INSTRUCTIONS

The tester is to read each sentence to the group and ask the children to indicate on their answer sheets if the sentence is right/ good / correct or wrong / bad / incorrect. If a sentence is right the children are to draw an "X" through the first white circle and if the sentence is wrong the children are to draw an "X" through the second black (dark) circle. The tester will say each sentence only once. Emphasize if anything sounds wrong in a sentence that the entire sentence is wrong and should be so marked. Also, emphasize that a sentence may be true and still be wrong / bad / incorrect, that is, a person who speaks Spanish would not say it "that way".

The tester should proceed with the test items only when the children have demonstrated during the practice items that they understand what is expected of them. Correct or verify responses given by the children during practice and point out the specific errors of grammar in a sentence by pronouncing the sentence a second time, exaggerating the error, and then by pronouncing the sentence in a corrected form, saying, "We don't say this in Spanish that way. We say it this way."

The tester should practice saying the sentences _before_ the test so that he can pronounce them easily and naturally during the test. The grammatically incorrect sentences are likely to be most difficult to pronounce with natural intonation. The tester should be particularly careful not to give away the wrong sentences by pronouncing them in a halting, hesitating or exaggerated manner.

PRACTICE ITEMS

P1. EL HOMBRE CAMINA CON DOS PIESES. (Incorrect: "El hombre camina con dos _pies_.")

P2. ¿ES REDONDO UN CÍRCULO? (Correct)

P3. LA SEÑORA FUENTES ES MAESTRO. (Incorrect: "La senora Fuentes es _maestra_.")

P4. LES GUSTA A LOS MUCHACHOS EL BEISBOL. (Correct)

P5. JUANITO PEREZ ES AUSENTE HOY. (Incorrect: "Juanito Perez _está_ ausente hoy.")

P6. ¿CUÁNDO LA ESCUELA EMPIEZA? (Incorrect: "Cuándo empieza la escuela?")

TEST

1. LA NIÑA ES ENFERMA HOY.
2. EL MUCHACHO SABE MANEJAR EL CARRO.
3. ESTOS TRES PERROS SON MUY GRANDE.
4. LA NIÑITA ESTA JUGANDO CON LA MUÑECA.
5. ME GUSTA LOS CABALLOS.
6. ESE HOMBRE ES MÁS GRANDE QUE YO.

7. EL LIBRO ROJO NO ES MÍO.
8. EL NIÑO ACABA DE VER SEÑOR JUAREZ.
9. EL GATO SIENTE MUCHA SED.
10. MARIA ES MUY BONITA.
11. MI HERMANO SABE MONTAR A CABALLO.
12. LOS NIÑOS QUIEREN A IR AL CINE ESTA NOCHE.
13. ¿SON AZULES LOS OJOS DE CARLITOS?
14. ¿CUÁNDO VIENE EL TREN?
15. LA NIÑA LIMPIASTE LOS PLATOS.
16. EL HOMBRE PONE EL SOMBRERO EN LA CABEZA.
17. GLORIA NO QUIERES IR A LA ESCUELA HOY.
18. EL BEBÉ TOMA SU LECHE TODOS LOS DÍAS.
19. ALICIA ESTÁ NO AQUÍ.
20. MI CABEZA DUELE.
21. LOS NIÑOS VAN A VER A LA MAESTRA GONZALES.
22. EL FUTBOL ES EN LA CAJA.
23. MI TÍA VIVE EN LA CALLE DIECISIETE.
24. YO SOY OCHO AÑOS DE EDAD.
25. LOS DOS MUCHACHOS SALIÓ DE LA CASA.
26. NOS MANDARON UNA CARTA.
27. ¿ESTÁ ALTO EL EDIFICIO NUEVO?
28. ¿A DÓNDE QUIERE IR EL NIÑO?
29. ESPAÑOL ES UNA LENGUA MUY BELLA.
30. MI TÍO ES CARPINTERO.

V.

SPANISH COMPETENCE SERIES

ORAL VOCABULARY

FORM A

INSTRUCTIONS

Say the names of the two or three things indicated for each row of pictures and have the children mark the picture of each thing named with a pencil or crayon. The child can mark with an "X". Pronounce each word and then pause for the child to find and mark the appropriate picture before proceeding to the next word in the series. Repeat at least twice the number of the item (corresponding to a row of pictures on the child's answer sheet) and periodically check to see if the children are marking on the appropriate row. Do not proceed with the test items until the children have demonstrated that they understand, by means of the practice items, what is expected of them.

PRACTICES EXERCISES

P1. Bicicleta. Perro

P2. Caballo. Libro. Mano.

TEST

1. Llave. Cuchara.
2. Peine. Caja.
3. Toalla. Corbata.

4. Pie. Tambor.
5. Escoba. Vaso.
6. Pera. Pescado.
7. Sobre. Regla.
8. Bandera. Hoja.
9. Cinto. Serrucho.
10. Cedrón. Ratón. Vaca.
11. Reloj. Anillo. Escritorio.
12. Zapato. Elefante. Pala.
13. Dinero. Estampillas. Cepillo.
14. Sombrilla. Sombrero. Leña.
15. Cordón. Taza. Cuchillo.
16. Plancha. Teléfono. Radio.
17. Huevo. Carne. Manzana.
18. Martillo. Pinzas. Desarmador.
19. Bos. Carro. Tren.
20. Enfermera. Mesera. Secretaria.
21. Carpintero. Policía. Soldado.
22. Guajolote. Pollo. Oso.
23. Pato. Conejo. Gatito
24. Gusano. Mosca. Araña.

VI

SPANISH COMPETENCE SERIES

LISTENING COMPREHENSION OF CONNECTED UTTERANCES

FORM A

INSTRUCTIONS

Read each riddle and also the three answers or solutions to each riddle out loud. Instruct the children to mark an "X" through the picture which is the correct solution or answer to each riddle.

PRACTICE EXERCISES

P1. Puede volar.
Puede cantar.
Camina con dos patas.
¿Qué es?

un conejo   un pájaro   una mariposa

P2. Es fácil de quebrar.
Se come en el desayuno.
Nos lo dan las gallinas.
¿Qué es?

un vaso   una pluma   un huevo

TEST

1. Brilla durante el dia.
Se va por la noche.
¿Qué es?

una lámpara   el sol   la luna

2. Es hecho de metal.
Se usa para comer.
¿Qué es?

un plato   una servilleta   un tenedor

3. Es hecho de vidrio.
Se puede mirar a si mismo en él.
¿Qué es?

un espejo	una tasa	una foto

4. Se puede oir.
Se puede sentir.
Pero no se puede ver.
¿Qué es?

el viento	la lluvia	el sol

5. Es hecha de tela.
Los hombres y muchachos la usan.
Se lleva alrededor del cuello.
¿Qué es?

un sombrero	ún delantal	una corbata

6. Es animal.
Es más chiquito que un caballo.
Nos da la lana.
¿Qué es?

una oveja	un perro	un pato

7. Es hecho de metal.
Cabe en la mano.
Tiene dos puntas agudas.
Se usa para cortar papel.
¿Qué es?

una pluma	un cuchillo	tijeras

8. Es larga y derecha.
Se encuentra en cualquier cuarto de clase.
Se usa para medir cosas.
¿Qué es?

una regla	un lapiz	un palo

9. Usa electricidad.
Da luz.
Se puede prender y apagar.
¿Qué es?

una campana   una plancha   una lámpara

10. Unas son chiquitas y verdes.
Crecen en los árboles.
Cuando caen de los árboles, son cafés.
¿Qué son?

flores   ramos   hojas

11. Tiene dos ruedas.
A los niños les gusta pasearse en ella.
No tiene motor.
¿Qué es?

un carro   una bicicleta   un triciclo

12. El trabaja afuera.
Usa martillo y serrucho.
Construye casas.
¿Quién es?

un carpintero   un policía   un granjero

13. Es plano como una pared.
Se encuentra en cualquier cuarto de clase.
Los niños escriben en él con tiza (o gis).
¿Qué es?

un cuaderno   un pizarrón   un escritorio

14. Puede volar.
Es más grande que un pájaro.
Puede llevar gente.
¿Qué es?

un tren   un avión   una nube

15. Se encuentra en el circo.
Tiene cara pintada y chistosa.
Le gusta hacer reír a los niños.
¿Qué es?

un payaso   un burro   un león

16. Es más chiquito que un pájaro.
Puede volar.
Tiene muchos colores.
¿Qué es?

una mariposa   una hormiga   un gorioncillo

17. Es chiquita.
Es hecha de metal.
Se usa para abrir las puertas.
¿Qué es?

un cuchillo   un serrucho   una llave

18. Es largo y angosto.
Se construyen puentes sobre él.
Se puede cruzar en barco.
¿Qué es?

el océano   una montaña   un rio

19. Se ve en el cielo.
Generalmente es de color blanco, como algodón.
De esto viene la lluvia.
¿Qué es?

una nube   el sol   un arco iris

20. Las mujeres y las muchachas lo usan.
Es fácil de quitar y poner.
Se usa en la cocina.
¿Qué es?

un plato   un delantal   un sombrero

INVENTORY OF SOCIALIZATION

I. INVENTORY OF PERSONAL-SOCIAL RESPONSIVENESS

PART A: Interview

Instructions for Administering and Scoring

As a test of social-personal responsiveness the child is to be asked to answer questions, carry out directions, and perform actions involving parts of his body and objects in the room. Each specific response of the child is to be scored by the interviewer as RIGHT or WRONG in accordance with specific criteria which are provided on the following questionnaire. Immediately after the interview is completed the interviewer is to score the child's general behavior and responsiveness during the interview by filling out the General Rating of Child's Behavior and Responsiveness, which forms Part B of this instrument.

The interview should be given in a room free from distracting sights and noises and other individuals. There should be present in the room a table, two chairs, a door, and a window. The interviewer should have a fountain pen and two books.

All of the child's responses are to be scored either RIGHT or WRONG. If the child does not make a response, score the item WRONG. The interviewer should in all cases accept and score the child's first response unless the child changes his first response spontaneously, in which case the child's second response is to be scored. The interviewer should not repeat any question or direction unless the child spontaneously signals by means of word, interjection or gesture that he did not hear or that he wants the interviewer to repeat. The child may, for example, indicate a desire for a repetition of a question or direction by saying, "What did you say?"; "What?"; "I'm sorry but I didn't hear (understand)."; "Uh?"; etc. Or, in Spanish, "¿Qué dijo?"; "¿Cómo?"; "¿Qué?"; "¿Mande?"; "¿Eh?"; etc. The child may also signal a desire for repetition by means of body movement and gesture, for example, by turning an ear toward the interviewer.

The interview should be conducted in the native (first) language of the child or in the language that the interviewer thinks the child will perform his best in. In some cases it might be necessary to repeat the interview in a different language to determine in which language the child performs best.

When the child enters the room the interviewer should smile at him and greet him cordially with "Hello, how are?" and "Will you please sit down here." ("Hola! Cómo estás?...Siéntate aquí por favor."). The interviewer and child should sit facing one another so that the child's entire body is within the interviewer's full view. The interviewer should have this inventory questionnaire, scoring sheet, and pencil off to one side and in a comfortable writing position. The interviewer should strive to keep his own attention on the child as much as possible so as not to draw the child's attention to the interviewer's reading and recording activities.

The interviewer should say to the child, "I am going to ask you a few questions and I want you to try to answer as best you can. I am also going to ask you to do some things in this room and I would like you to try to do them as best you can. Now listen carefully because I will say everything only one time. This is not a test. This is kind of game that we are going to play. First, I am going to ask you a few questions. Answer as best you can." ("Voy a hacerte algunas preguntas y quiero que tu trates de contestarlas lo mejor que puedes. También voy a pedirte que hagas algunas cosas en este cuarto y quiero que tu las hagas lo mejor que puedas. Ahora escúchame bien porque no voy a repetir las preguntas. Esto no es una prueba. Es una clase de juego que vamos a jugar. Ahora, voy a hacerte algunas preguntas. Contesta lo mejor que puedas."

1. WHAT'S YOUR NAME?
   ¿COMÓ TE LLAMAS?

   Credit as RIGHT first name only or first and last name.

2. HOW OLD ARE YOU?
   ¿CUÁNTOS AÑOS TIENES?

   Credit age spoken or number of fingers held up.

3. WHEN'S YOUR BIRTHDAY?
¿CUÁNDO ES TU CUMPLEAÑOS?

Month or month and date. Also such responses as "Next month," or "Last Tuesday," ("El próximo mes... el mes que viene... el martes pasado.") etc.

4. HOW MANY BROTHERS AND SISTERS DO YOU HAVE?
¿CUÁNTOS HERMANOS Y HERMANAS TIENES?

Number spoken or number of fingers held up. Also, a specification of number of brothers, number of sisters, or none.

5. WHAT DAY IS TODAY?
¿QUÉ DÍA ES HOY?

Spoken name of correct day of week.

6. IS THIS MY NOSE? (Interviewer holds his own nose.)
¿ES ESTO LA NARIZ?

Any affirmative expression, gesture or interjection.

7. ARE MY EYES CLOSED? (Interviewer's eyes are open.)
¿ESTÁN CERRADOS LOS OJOS?

Any negative expression, gesture or interjection.

8. ARE YOU SITTING DOWN?
¿ESTÁS SENTADO AHORA?

Any affirmative expression, gesture or interjection.

9. IS THERE A WINDOW IN THIS ROOM?
¿HAY UNA VENTANA EN ESTE CUARTO?

Any affirmative expression, gesture or interjection.

10. WHAT DO YOU CALL THIS? (Interviewer holds his own ear.)
¿COMÓ SE LLAMA ESTO?

Ear (oreja or oído).

11. WHAT DO YOU CALL THIS? (Interviewer pats his own shoulder.)
¿COMÓ SE LLAMA ESTO?

Shoulder (Hombro).

12. WHAT DO YOU CALL THIS? (Interviewer points to his own knee.)
¿COMÓ SE LLAMA ESTO?

Knee (Rodilla).

13. WHAT DO YOU CALL THIS? (Interviewer opens his own mouth and indicates it with his finger.)
¿COMÓ SE LLAMA ESTO?

Mouth (Boca).

"Now I'm going to ask you to do or say some things for me. Listen carefully and try to do them as best you can." ("Ahora voy a pedirte que hagas o digas algunas cosas para mí. Escúchame bien y trata de hacerlas lo mejor que puedes.")

14. COUNT TO FIVE FOR ME.
CUENTA HASTA CINCO PARA MÍ.

Spoken counting to five or silent counting on fingers.

15. SAY "THANK YOU" VERY SOFTLY. (Be sure not to say it softly yourself.)
DIME "GRACIAS" EN VOZ MUY BAJITA.

"Thank you" ("Gracias") if noticeably softer.

16. SAY "THANK YOU" VERY LOUDLY. (Be sure to use normal tone.)
DIME "GRACIAS" EN VOZ MUY ALTA.

"Thank you" ("Gracias") if noticeably louder.

17. TELL ME THE NAME OF YOUR BEST FRIEND.
DIME EL NOMBRE DE TU MEJOR AMIGO O AMIGA.

First name or first name and last name.

18. SHOW ME WHERE YOUR HEART IS.
ENSÉÑAME DONDE ESTÁ TU CORAZÓN.

Any indication of the chest area.

19. SHOW ME YOUR EYES.
ENSÉÑAME TUS OJOS.

Any indication which demonstrates that the child knows the correct answer, e.g. a prolonged blink, or wide opening of the eyes.

20. SHOW ME YOUR NECK.
ENSÉÑAME TU PESQUEZO.

Any indication of the neck, e.g. lifting of chin, forward thrusting of neck, pointing to the neck, etc.

21. SHOW ME YOUR THUMB.
ENSÉÑAME TU DEDO GORDO.

Any indication of the thumb, e.g. holding out a hand with thumb raised.

22. SHOW ME YOUR ELBOW.
ENSÉÑAME TU CODO.

Any indication of the elbow, e.g. holding an elbow out from the body.

23. RAISE YOUR HAND.
LEVANTA LA MANO.

Any lifting of a hand.

24. WAVE YOUR HAND..
MUEVE LA MANO.

Any moving or waving of the hand.

25. SCRATCH YOUR HEAD.
RÁSCATE LA CABEZA.

Any scratching or touching of the head.

26. COUGH VERY LOUDLY.
TOSE MUY FUERTE.

Any audible cough or any attempt at a cough.

27. CLAP YOUR HANDS TOGETHER.
TRUENA LAS MANOS.

A single or repeated claps of the hands.

28. NOD YOUR HEAD.
INCLINA LA CABEZA.

A nod of the head.

29. SMILE, AS IF YOU WERE VERY HAPPY.
SONRÍETE COMO SI ESTUBIERAS MUY CONTENTO.

Any smile or any up-turn of the corners of the mouth or baring of the teeth.

30. LAUGH OUT LOUD AS IF SOMETHING WERE VERY FUNNY.
RÍETE A CARCAJADAS COMO SI ALGO FUERA MUY CHISTOSO.

Any audible laughing, giggling, snickering, or any attempt at such.

31. LOOK VERY SAD AS IF YOU WERE ABOUT TO CRY.
PONTE MUY TRISTE COMO SI ESTUBIERAS A PUNTO DE LLORAR.

Any frowning, pouting, or crying.

32. STAND UP AND TURN AROUND.
PONTE DE PIE Y DA UNA VUELTA.

Credit standing up and turning completely around once or several times in the specified order.

33. POINT TO YOUR FEET AND THEN TO YOUR HEAD.
APUNTA A TUS PIES Y DESPUÉS A TU CABEZA.

Credit any indication of the feet and the head in the specified order.

34. MOTION TO SOMEONE TO COME HERE AND THEN WAVE GOODBYE.
SEÑALA A ALGUIEN QUE VENGA ACÁ Y DESPUÉS DESPÍDETE CON OTRA SEÑA.

Credit any motioning-here (with fingers pointed either up or down) and any waving-goodbye. Both actions must be done in the specified order for credit.

35. STAND UP AND CLAP YOUR HANDS TOGETHER.
PONTE DE PIE Y TRUENA LAS MANOS.

Credit standing up and a clap or clapping of the hands in this order.

36. POINT TO THE DOOR AND THEN TO THE WINDOW.
APUNTA A LA PUERTA Y DESPUÉS A LA VENTANA.

Any indicating of the door and the window in this order.

37. LOOK UNDER YOUR CHAIR AND THEN LOOK UP AT THE CEILING.
MIRA DEBAJO DE TU SILLA Y DESPUÉS MIRA HACIA EL CIELO.

Any looking-down followed by any looking-up in this order.

38. TAKE THIS PEN AND PUT IN ON THE TABLE.
TOMA ESTA PLUMA Y PONLA EN LA MESA.

Interviewer hands child pen. Credit if action is carried out. Ask child to resume seat.

39. TAKE THIS BOOK AND PUT IT UNDER YOUR CHAIR.
TOMA ESTE LIBRO Y PONLO DEBAJO DE TU SILLA.

Interviewer hands child a book. Credit if action is carried out in the proper order. Ask child to resume his seat.

40. TAKE THIS BOOK AND PUT IT ON THE TABLE BY THE PEN.
TOMA ESTE LIBRO Y PONLO EN LA MESA AL LADO DE LA PLUMA.

Credit if child completes all actions in proper order.

"That's all. Thank you very much. You can go now." ("Bueno, eso es todo. Muchas gracias. Puedes salir ahora.")

SCORING SHEET

INVENTORY OF PERSONAL-SOCIAL RESPONSIVENESS

PART A: Interview

GIVEN IN ENGLISH______ OR SPANISH________?

NAME OF CHILD________________

INTERVIEWER________________

CLASS/SECTION________________

INSTRUCTIONS:

Circle "R" for a right response and "W" for a wrong response or no response.

1. R W
2. R W
3. R W
4. R W
5. R W
6. R W
7. R W
8. R W
9. R W
10. R W
11. R W
12. R W
13. R W
14. R W
15. R W
16. R W
17. R W
18. R W
19. R W
20. R W
21. R W
22. R W
23. R W
24. R W
25. R W
26. R W
27. R W
28. R W
29. R W
30. R W
31. R W
32. R W
33. R W
34. R W
35. R W
36. R W
37. R W
38. R W
39. R W
40. R W

COMMENTS:

INVENTORY OF SOCIALIZATION

I. INVENTORY OF PERSONAL-SOCIAL RESPONSIVENESS

PART B: Rating of Child's Behavior and Responsiveness

Instructions

Immediately after completing the interview with the child, the interviewer should fill out this part of the inventory. He should base his judgments solely on his general observations and impressions of the child during the interview. It is advisable that the interviewer read over the following statements before the interview itself in order to have some guidelines for his observations and impressions.

Record a number (from 1 to 4) on the separate rating sheet which indicates your judgment of the extent or frequency of each behavioral characteristic of the child during the interview.

	VERY MUCH	SOMEWHAT	VERY LITTLE	NOT AT ALL
1. The child responded quickly and without hesitation.	1	2	3	4
2. The child's attention wandered from the task at hand.	1	2	3	4
3. The child seemed to do the tasks asked of him willingly.	1	2	3	4
4. The child seemed to enjoy doing the tasks asked of him.	1	2	3	4

		VERY MUCH	SOMEWHAT	VERY LITTLE	NOT AT ALL
5.	The child's verbal responses were usually a single word.	1	2	3	4
6.	The child's verbal responses were usually a phrase or sentence.	1	2	3	4
7.	The child seemed threatened or cowed by the interviewer or situation.	1	2	3	4
8.	When a non-verbal (gestural) response was an adequate response, the child usually added a verbal response.	1	2	3	4
9.	The child responded to the interviewer's smile in a like manner.	1	2	3	4
10.	The child moved about, wiggled or changed positions in his chair.	1	2	3	4
11.	The child appeared to understand all or nearly all of the questions and directions of the interviewer.	1	2	3	4
12.	The child appeared rude or discourteous to the interviewer in some way.	1	2	3	4
13.	The child appeared at some time to be excessively or unduely afraid.	1	2	3	4
14.	The child cried or almost began to cry during the interview. (Disregard Item No. 31.)	1	2	3	4
15.	The child pouted, wore a prolonged frown during the interview.	1	2	3	4
16.	The child seemed to aceept the situation and the interview without question.	1	2	3	4

		VERY MUCH	SOMEWHAT	VERY LITTLE	NOT AT ALL
17.	The child asked questions to clarify what was expected of him.	1	2	3	4
18.	The child tried to talk to the interviewer or initiate conversation about matters other than the interview.	1	2	3	4
19.	The child showed interest in the interviewer by asking questions of a personal, curious or friendly nature.	1	2	3	4
20.	The child looked at the interviewer after each of his responses for an indication of its appropriateness or for approval or disapproval.	1	2	3	4
21.	The child tended to return the interviewer's looks and glances, e.g., there was frequent eye contact between the child and interviewer.	1	2	3	4
22.	The child tried to maintain considerably physical distance between himself and the interviewer.	1	2	3	4
23.	The child approached the interviewer very closely or tried to touch him.	1	2	3	4
24.	The child fidgeted, played with himself, his clothes, or his chair.	1	2	3	4
25.	The child seemed shy, timid or embarrassed during the interview.	1	2	3	4
26.	The child touched his face or head with his hands during the interview.	1	2	3	4

	VERY MUCH	SOMEWHAT	VERY LITTLE	NOT AT ALL
27. The child bit his lip or his nails during the interview.	1	2	3	4
28. The child tried to leave the interview while it was in progress.	1	2	3	4
29. The child avoided the glance of the interviewer for prolonged periods of time.	1	2	3	4
30. The child tended to crouch or slump down in his chair during the interview.	1	2	3	4
31. The child responded in a barely audible voice.	1	2	3	4
32. The child responded in the language he was addressed.	1	2	3	4
33. The child signalled to the interviewer by means of word, interjection or gesture to repeat questions and directions.	1	2	3	4
34. The child responded slowly and with considerable hesitation.	1	2	3	4
35. The child appeared unsure of his responses, e.g. by putting a rising intonation on statements.	1	2	3	4

RATING SHEET

INVENTORY OF PERSONAL-SOCIAL RESPONSIVENESS

PART B: Rating of Child's Behavior
and Responsiveness

NAME OF CHILD____________

RATER____________

CLASS/SECTION____________

INSTRUCTIONS

Write a number (from 1 to 4) in the appropriate blank spaces which indicates your judgment of the extent or frequency of each behavioral characteristic of the child during the interview.

Key: 1 = VERY MUCH
2 = SOMEWHAT
3 = VERY LITTLE
4 = NOT AT ALL

1. ______
2. ______
3. ______
4. ______
5. ______
6. ______
7. ______
8. ______
9. ______
10. ______
11. ______
12. ______
13. ______
14. ______
15. ______
16. ______
17. ______
18. ______
19. ______
20. ______
21. ______
22. ______
23. ______
24. ______
25. ______
26. ______
27. ______
28. ______
29. ______
30. ______
31. ______
32. ______
33. ______
34. ______
35. ______

COMMENTS:

INVENTORY OF SOCIALIZATION

II: RECORD OF OBSERVATION OF SCHOOL ADJUSTMENT AND BEHAVIOR

Instructions: In the spaces provided before each behavioral characteristic or pattern, the observer should put the number which indicates the extent to which each behavioral characteristic or pattern accurately describe the behavior of this pupil according to the following rating scale:

Symbol	Extent of the Characteristic or Pattern
0	Never has behaved this way
1	Has behaved this way at least once
2	Sometimes has behaved this way
3	Frequently has behaved this way
4	Has behaved this way characteristically
5	Has behaved this way as a dominant pattern

Be careful to base your ratings to every item on your own personal observation and experience with the pupil in the school environment. If significant changes have occurred in a child's behavior during the period of contact or observation, rate the most recent characteristics or patterns.

1. _____ Is quarrelsome with classmates for minor reasons.

2. _____ Is eager to tell other children about his own experiences.

3. _____ Likes to talk with the teacher; approaches teacher outside of class time to ask questions of a personal, friendly, and inquisitive nature.

4. _____ Does not need attention or approval from teacher or teacher assistant to sustain him in his classroom activities; does not look to them for signs of approval or disapproval when working on a task.

5. _____ Asks to be dismissed from class in order to go to the bathroom.

6. _____ Becomes ill in school.

7. _____ Exhibits evidence of racial, cultural, or social prejudice, e.g., is disinclined to take part in play or work activities with other children of different skin coloring or socioeconomic background, etc.

8. ____ Finds it difficult to work or play by himself, requires the company of other children.

9. ____ Is lethargic or apathetic, has little energy or drive, does not like to exert himself physically.

10. ____ His behavior is often imitated by other children.

11. ____ Exhibits no evidence of racial, cultural, or social prejudice; accepts all children in his class as his equals.

12. ____ Demonstrates imaginativeness and creativity in his handicraft work.

13. ____ Is clean, well groomed, tidy, and neat with regard to personal appearance.

14. ____ Shows affection and appreciation toward teacher, comes forward of his own volition to perform useful tasks for teacher.

15. ____ Is alert to everything that happens in his immediate vicinity.

16. ____ Is unnecessarily upset or discouraged if he makes a mistake or does not perform well; responds to frustration or disappointment by becoming sullen, withdrawn, or sulky.

17. ____ Talks eagerly to strange adults who visit his classroom about his own experiences, thoughts, and feelings.

18. ____ Works seriously and earnestly at his classwork, does not take school activities lightly.

19. ____ Cooperates with other children.

20. ____ Likes to work independently, tries to figure out things for himself before calling on teacher or other children for help.

21. ____ Laughs easily and freely when the situation is appropriate.

22. ____ Completes his assignments or tasks.

23. ____ Steals or takes personal objects from other children.

24. _____ Is isolated, left alone, or rejected by classmates.

25. _____ Lies.

26. _____ Cheats or copies the work of other children during testing.

27. _____ Is impudent, resentful, or ill-mannered toward the teacher.

28. _____ Works only when he receives close assistance or direction.

29. _____ Is excessive and agressive in seeking the attention of adults.

30. _____ Cries.

31. _____ Does only what he wants to.

32. _____ Prefers to play alone.

33. _____ Shows even temper, is imperturbable, is not annoyed or cross with other children.

34. _____ Is quiet and tries to escape notice of teacher.

35. _____ Disrupts class by yelling loudly, jumping up from seat, throwing things, etc.

36. _____ Starts to do things before he completely understands directions and thus does things incorrectly.

37. _____ Stands up for his rights; e.g., will not yield his place in line, insists on getting his turn at play, etc.

38. _____ Pouts or frowns for prolonged periods of time.

39. _____ Is with one or more friends during recess, play, or lunch.

40. _____ Understands directions of the teacher the first time they are given and correctly performs assigned tasks.

41. _____ Is inattentive, is easily distracted by things going on around him.

42. _____ Daydreams; attention wanders from tasks at hand; is not prepared to answer when called on because he has not been listening.

43. _____ Is helpful, sympathetic, considerate, and thoughtful toward other children.

44. _____ Is easily angered or irritated.

45. _____ Keeps aloof from others.

46. _____ Volunteers to give answers to the teacher's questions.

47. _____ Volunteers to perform alone before his class, e.g., recitations, pledge of allegiance, etc.

48. _____ Exhibits self-confidence, appears to trust in his own abilities, is confident that he can do what is expected of him.

49. _____ Has to be urged to control posture when seated.

50. _____ Smiles or exhibits otherwise a pleasing expression.

51. _____ Respects the rights and property of other children.

52. _____ Accepts correction from the teacher pleasantly.

53. _____ Fights with or strikes other children.

54. _____ Is invited by other children to join a group, is wanted as a playmate by other children.

55. _____ Talks in moderate tones and tempos; not too loud or too soft, not too fast, not too slow.

56. _____ Does what adults ask him to do.

57. _____ Is courteous to the teacher.

58. _____ Exhibits signs of jealousy; is quick to notice and react negatively to kindness or attention showed other children.

59. _____ Prefers the habitual and familiar to the novel and unfamiliar.

60. _____ Speaks in a barely audible voice.

61. _____ Responds by shaking or nodding head.

62. _____ Shows little respect for the rights of other children, refuses to wait his turn, takes away objects and toys other children are using or playing with.

63. _____ Leaves tasks unfinished.

64. _____ Approaches new tasks timidly and without confidence, shrinks from trying new things, gives up very quickly.

65. _____ Emotional response to things, people, and events is very pronounced; over-responds to usual classroom problems, frustrations, and difficulties.

66. _____ Is absent from school.

67. _____ Is shy, timid, and inhibited; will not engage in activities unless strongly encouraged to do so.

68. _____ Defends or praises his own efforts and accomplishments.

69. _____ Is uncooperative and intractable in group activities.

70. _____ Is reluctant to talk to adult visitors; responds verbally only when excessively urged and prompted.

71. _____ Lets other children impose on him or boss him around, is highly suggestible, is eager to do the bidding of other children.

72. _____ Is careful, neat, and methodical in the tasks that he performs.

73. _____ Is carefree, does not become frightened or apprehensive.

74. _____ Settles difficulties that arise between himself and other children without appealing to teacher or teacher assistant.

75. _____ Responds to frustration or disappointment by becoming angry, agressive, or beligerent.

76. _____ Is not able to influence other children by his activities and interests.

77. ____ Is reluctant to give free rein to his imagination, does not like "make-believe" games or exercises.

78. ____ Is not interested or concerned about the quality of his performance.

79. ____ Goes about his activities with only a minimum of assistance from others.

80. ____ Likes new situations, changes, novelty; is venturesome, inquisitive, etc.

81. ____ Expresses annoyance when interrupted while engaged in demanding activities, e.g., doing difficult assignment, a puzzle, painting, etc.

82. ____ Seeks favorable attention; asks questions for information about things, places, persons, etc.,; questions seem to be prompted by a genuine curiosity rather than bids for attention.

83. ____ Is polite to adults; says "Please," "Excuse me," "Thank You," "Por favor", "Con su permiso", "Muchas Gracias," etc.

84. ____ Takes good care of his school books, supplies, and materials.

85. ____ Is finicky and choosy in his eating habits.

86. ____ Makes derrogatory statements about his own cultural background.

87. ____ Makes derrogatory statements about the cultural background of others which is different from his own.

Record of Observation of School Adjustment and Behavior

SCORING SHEET

NAME OF CHILD ________________________________
(Last) (First)

Instructions

Fill in the blank beside each number with a number from 0 to 5 which indicates the extent of characteristic or pattern observed.

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APPENDIX B.

1. Bicultural System of Weights

Teachers' rating of negativity (undesireableness) and positivity (desireableness) of behavior patterns of children observed in the interview for the Inventory of Personal-Social Responsiveness.

Mean Ratings of Eight Teachers

1. +4.375
2. -3.75
3. +4.5
4. +4.5
5. +2.0
6. +4.25
7. -4.125
8. +3.375
9. +3.375
10. -1.125
11. +3.5
12. -4.5
13. -4.5
14. -4.375
15. -4.25
16. +3.25
17. +2.75
18. -1.0
19. +1.75
20. +1.25
21. +4.0
22. -4.125
23. - .75
24. -3.875
25. -3.125
26. -2.125
27. -3.875
28. -4.125
29. -4.125
30. -3.375
31. -2.0
32. +4.375
33. +2.875
34. -4.125
35. -3.875

Teachers' rating of negativity (undesireableness) and positivity (desireableness) of behavior patterns of children given in the Record of Observation of School Adjustment and Behavior.

Mean Ratings for Eight Teachers

1. -4.5
2. +4.5
3. +4.0
4. +3.875
5. - .375
6. -2.875
7. -4.625
8. -2.75
9. -2.375
10. +4.375
11. +4.875
12. +4.625
13. +4.75
14. +4.25
15. +4.5
16. -4.125
17. +3.125
18. +4.75
19. +4.75
20. +4.75
21. +4.625
22. +4.75
23. -4.375
24. -4.75
25. -3.625
26. -3.875
27. -5
28. -2.75
29. -3.5
30. -2.875
31. -3.625
32. -2.875
33. +4.125
34. - .625
35. -5
36. -3.125
37. +1.625
38. -4.25
39. +4.375
40. +4.75
41. -3.375
42. -2.75
43. +4.5
44. -3.5
45. -3.625
46. +4.5
47. +4.75
48. +4.75
49. -2.125
50. +4.375
51. +4.75
52. +4.75
53. -3.125
54. +4.75
55. +3.125
56. +4.5
57. +5
58. -3.125
59. -1.125
60. -3.5
61. 1.875
62. -4.25
63. -4.375
64. -4.0
65. -3.625
66. -1.875
67. -2.75
68. +3.75
69. -4.25
70. -3.125
71. -4.25
72. +4.75
73. +4.25
74. +4.25
75. -4.25
76. -3.5
77. -3.125
78. -4.5
79. +3.875
80. +4.625
81. +1.0
82. +4.625
83. +4.625
84. +4.75
85. -1.875
86. -4.625
87. -4.75

2. Anglo Systems of Weights*

Teachers' rating of negativity (undesireableness) and positivity (desireableness) of behavior patterns of children observed in the interview for the *Inventory of Personal-Social Responsiveness*.

Mean Ratings of Four Teachers

1. +5.0
2. -4.0
3. +5.0
4. +5.0
5. +0.5
6. +4.0
7. -4.25
8. +3.25
9. +4.75
10. -2.25
11. +5.0
12. -4.75
13. -5
14. -4.5
15. -5
16. +3.25
17. +3.5
18. -1.25
19. +2.5
20. -1.75
21. +5.0
22. -5.0
23. -0.25
24. -4.25
25. -4.5
26. -2.5
27. -4.0
28. -5.0
29. -5.0
30. -3.0
31. -4.0
32. +4.75
33. +5.0
34. -4.0
35. -4.0

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* One Negro teacher was included in this group since her ratings were more like those of the Anglo teachers than the Mexican-American teachers.

Teachers' rating of negativity (undesireableness) and positivity (desireableness) of behavior patterns of children given in the Record of Observation of School Adjustment and Behavior.

Mean Ratings of Four Teachers

1.	-4.75	23.	-5	45.	-3.5	67.	-4.75
2.	+4	24.	-5	46.	+4.5	68.	+2
3.	+4	25.	-4.75	47.	+4.75	69.	-5
4.	+3.75	26.	-5	48.	+5	70.	-3.5
5.	-2	27.	-5	49.	-2.25	71.	-5
6.	-2.25	28.	-4.25	50.	+4.25	72.	+5
7.	-5	29.	-3.5	51.	+5	73.	+4.25
8.	-3.75	30.	-3	52.	+4.75	74.	+4.75
9.	-2.75	31.	-4.5	53.	-3.5	75.	-5
10.	+4.5	32.	-3.25	54.	+5	76.	-4
11.	+5	33.	+4.5	55.	+4	77.	-3.25
12.	+5	34.	- .25	56.	+4.5	78.	-5
13.	+5	35.	-5	57.	+5	79.	+5
14.	+4.25	36.	-4.25	58.	-4.5	80.	+4.75
15.	+4.5	37.	+1.5	59.	-1.5	81.	+2
16.	-5	38.	-5	60.	-3.5	82.	+5
17.	+3.25	39.	+4.75	61.	-3	83.	+5
18.	+5	40.	+5	62.	-5	84.	+5
19.	+4.5	41.	-4.75	63.	-5	85.	-2
20.	+5	42.	-4.25	64.	-4.75	86.	-5
21.	+5	43.	+4.75	65.	-4.75	87.	-5
22.	+5	44.	-5	66.	-1.5		

3. Mexican-American System of Weights

Teachers' rating of negativity (undesireableness) and positivity (desireableness) of behavior patterns of children observed in the interview for the Inventory of Personal-Social Responsiveness.

Mean Ratings of Four Teachers

1. +3.75
2. -3.5
3. +4.0
4. +4.0
5. +3.5
6. +4.5
7. -4.0
8. +3.5
9. +2.0
10. 0.0
11. +2.0
12. -4.25
13. -4.0
14. -4.25
15. -3.5
16. +3.25
17. +2.0
18. - .75
19. +1.0
20. +2.0
21. +3.0
22. -3.5
23. -1.25
24. -3.5
25. -1.75
26. -2.25
27. -3.75
28. -3.25
29. -3.25
30. -3.75
31. 0.0
32. +4.0
33. + .75
34. -4.25
35. -3.75

Teachers' rating of negativity (undesireableness) and positivity (desireableness) of behavior patterns of children given in the Record of Observation of School Adjustment and Behavior

Mean Ratings of Four Teachers

1.	-4.25
2.	+5.0
3.	+4.0
4.	+4.0
5.	+1.25
6.	-3.5
7.	-4.25
8.	-3.75
9.	-4.0
10.	+4.25
11.	+4.75
12.	+4.25
13.	+4.5
14.	+4.25
15.	+4.5
16.	-3.25
17.	+3.0
18.	+4.5
19.	+4.25
20.	+4.25
21.	+4.25
22.	+4.25
23.	-3.75
24.	-4.5
25.	-2.5
26.	-2.75
27.	-5
28.	-1.25
29.	-3.5
30.	-2.25
31.	-2.75
32.	-2.5
33.	=3.75
34.	-1.25
35.	-5
36.	-2
37.	+1.75
38.	-3.5
39.	+4
40.	+4.5
41.	-2
42.	-1.25
43.	+4.25
44.	-2
45.	-3.75
46.	+4.5
47.	+4.75
48.	+4.5
49.	-1.75
50.	+4.5
51.	+4.5
52.	+4.75
53.	-2.75
54.	+4.5
55.	+3.75
56.	+4.5
57.	+5
58.	-3.25
59.	-.75
60.	-3
61.	-1.25
62.	-3.5
63.	-3.75
64.	-3.25
65.	-3.5
66.	-1.25
67.	-2.75
68.	+3.5
69.	-3.5
70.	-2.5
71.	-3.5
72.	+4.5
73.	+4.25
74.	+3.75
75.	-4.5
76.	-3
77.	-3
78.	-4
79.	+2.75
80.	+4.5
81.	0
82.	+4.25
83.	+4.25
84.	+4.5
85.	-1.75
86.	-4.25
87.	-4.5

APPENDIX C.

Intercorrelation of the TOBABS Sub-Test Scores and Ratings with Each Other and with Other Measures or Variables.

The intercorrelation of the various parts of the Tests of Bilingualism and Bicultural Socialization (TOBABS) with each other and with other measures or variables is presented here. Intercorrelations are presented separately for experimental and control groups. Mean scores and SDs are also given.

The attendance variable is the number of absences in a 146 day observational period. The ranking variable is an independent and overall quartile rank of a child's progress in class with respect to his own classmates which was made by his teacher. The I. Q. variable is the Otis Alpha Quick-Scoring Mental Ability Test. The scores on the Otis were the only pre-test data available. This test was translated and given in colloquial Spanish to the majority of the native Spanish-speaking children in the experimental and control sections. The achievement variable is their score on the Stanford Achievement Test, Primary Battery I.

The various sub-tests of the English Competence Series and the Spanish Competence Series are designated ECS I, ECS II, etc. and SCS I, SCS II, etc. For a full designation of the title of each sub-test one may refer to Appendix A, page 110. The Inventory of

Socialization (*IOS*) has been broken down into the following sub-measures:

IOS I	Personal-Social Responsiveness Interview
IOS II	Personal-Social Responsiveness Rating, Positive Index
IOS III	Personal-Social Responsiveness Rating, Negative Index
IOS IV	Personal-Social Responsiveness Rating, Overall Index
IOS V	Rating of Adjustment and Behavior, Positive Index
IOS VI	Rating of Adjustment and Behavior, Negative Index
IOS VII	Rating of Adjustment and Behavior, Overall Index

The "Bicultural System of Weights" (See Appendix 81) has been incorporated in all sub-measures of the *IOS* except *IOS* I.

INTERCORRELATION OF SCORES ON SIX SUB-TESTS OF THE ECS AND TOTAL SCORE* AND ON SIX SUB-TESTS OF THE SCS AND TOTAL SCORE* WITH EACH OTHER AND WITH FOURTEEN OTHER VARIABLES

Valid N = 51 Subjects In The Experimental Group, Except When A Smaller N Is Noted In Parentheses

ENGLISH COMPETENCE SERIES

	Variables	Mean	Standard Deviation	ECS I	ECS II	ECS III	ECS IV	ECS V	ECS VI	Total ECS*
	Attendance (48)	10.04	8.39	-.025	.002	-.213	-.140	.051	-.121	-.151
	Ranking	2.47	1.18	-.527	-.386	-.529	-.530	-.378	-.453	-.669
	Otis IQ (50)	90.32	13.45	.691	.527	.342	.631	.457	.368	.685
	Achievement (47)	1.69	.52	.538	.314	.561	.617	.376	.329	.704
	ECS I	20.69	3.02	--	.792	.290	.522	.627	.404	.776
	ECS II	21.69	3.08	.792	--	.244	.334	.642	.274	.669
	ECS III	23.24	4.50	.290	.244	--	.410	.477	.558	.729
	ECS IV	18.98	4.22	.522	.334	.410	--	.571	.432	.760
	ECS V	58.33	4.09	.627	.642	.477	.571	--	.644	.793
	ECS VI	16.49	3.22	.404	.274	.558	.432	.644	--	.727
	SCS I	20.69	3.47	.034	-.066	.079	.125	.126	.233	.116
	SCS II	21.51	3.83	-.328	-.216	-.137	-.116	-.110	-.012	-.211
	SCS III	25.22	4.66	.225	.117	.627	.393	.274	.480	.634
	SCS IV	20.0	3.79	.155	-.048	.229	.245	.118	.450	.290
	SCS V	59.75	5.08	-.314	-.252	-.248	-.241	-.170	-.090	-.313
	SCS VI	16.10	3.03	.175	.087	.655	.282	.411	.685	.540
Teachers Ratings	IOS I	35.92	2.71	.139	-.165	.309	.173	.170	.180	.197
	IOS II	1524.	205.	.448	.221	.247	.408	.254	.183	.412
	IOS III	-699.	161.	-.074	-.151	-.075	.089	-.017	-.064	-.064
	IOS IV	825.	297.	.269	.070	.130	.330	.166	.092	.250
	IOS V	4793.	1280.	.622	.364	.462	.563	.482	.506	.686
	IOS VI	-1827.	839.	.110	.015	.201	.149	-.040	.259	.207
	IOS VII	2965.	1914.	.464	.250	.397	.442	.306	.452	.550
Aides Ratings	IOS V	5116.	1616.	.466	.280	.609	.522	.389	.437	.651
	IOS VI	-1554.	796.	.195	.077	.095	.118	-.017	.215	.185
	IOS VII	3563.	2094.	.434	.245	.501	.448	.293	.419	.573
	ECS TOTAL*	101.08	13.25	.776	.669	.729	.760	.793	.727	--
	SCS TOTAL*	103.49	14.02	.074	-.031	.394	.257	.213	.483	.343

*Total ECS and SCS scores do not include Sub-Test V Oral Vocabulary

Levels of significant correlation for		
N = 46 or 47	.284 at .05 and .368 at .01
N = 48	.279 at .05 and .361 at .01
N = 50 or 51	.273 at .05 and .354 at .01

INTERCORRELATION OF SCORES (CONTINUED)

SPANISH COMPETENCE SERIES

	VARIABLES	SCS I	SCS II	SCS III	SCS IV	SCS V	SCS VI	TOTAL SCS*
	Attendance (48)	.084	.230	.012	-.025	.080	.174	.098
	Ranking	-.209	.125	-.580	-.446	.125	-.359	-.408
	Otis IQ (50)	-.214	-.465	.174	.045	-.477	.210	-.065
	Achievement (47)	-.017	-.409	.331	-.110	-.353	.248	.003
	ECS I	.034	-.327	.225	.155	-.314	.175	.074
	ECS II	-.066	-.216	.117	-.048	-.252	.087	-.031
	ECS III	.079	-.137	.627	.229	-.248	.655	.394
	ECS IV	.125	-.116	.393	.245	-.241	.282	.257
	ECS V	.126	-.110	.274	.118	-.170	.411	.213
	ECS VI	.233	-.012	.480	.450	-.089	.685	.483
	SCS I	--	.726	.344	.488	.732	.377	.774
	SCS II	.726	--	.211	.417	.843	.204	.678
	SCS III	.344	.211	--	.550	.041	.611	.756
	SCS IV	.488	.417	.550	--	.339	.541	.804
	SCS V	.732	.843	.041	.339	--	.119	.543
	SCS VI	.377	.204	.611	.541	.119	--	.748
Teachers Ratings	IOS I	.045	-.199	.092	.042	-.185	.266	.056
	IOS II	-.270	-.444	.062	-.107	-.526	-.149	-.229
	IOS III	-.153	-.124	-.114	-.018	-.096	-.125	-.142
	IOS IV	-.269	-.374	-.019	-.084	-.415	-.171	-.235
	IOS V	.239	-.269	.400	.311	-.177	.318	.271
	IOS VI	.291	-.015	.296	.390	.148	.181	.311
	IOS VII	.287	-.181	.396	.379	-.054	.292	.318
Aides Ratings	IOS V	.020	-.348	.416	.186	-.303	.331	.170
	IOS VI	.297	.096	.254	.392	-.150	.088	.311
	IOS VII	.128	-.232	.420	.293	-.177	.289	.250
	ECS TOTAL*	.116	-.211	.534	.290	-.313	.540	.343
	SCS TOTAL*	.774	.678	.756	.804	.543	.715	--

*Total ECS and SCS scores do not include Sub-Test V Oral Vocabulary

Levels of significant correlation for N = 46 or 47 .284 at .05 and .368 at .01
N = 48 .279 at .05 and .361 at .01
N = 50 or 51 .273 at .05 and .354 at .01

INTERCORRELATION OF TEN SUB-MEASURE SCORES ON THE INVENTORY OF SOCIALIZATION (IOS) WITH EACH OTHER AND EIGHTEEN OTHER VARIABLES

Valid N = 51 Subjects In The Experimental Group,
Except Where A Smaller N Is Indicated In Parentheses

		TEACHER RATINGS							AIDES RATINGS		
	VARIABLES	IOS I	IOS II	IOS III	IOS IV	IOS V	IOS VI	IOS VII	IOS V	IOS VI	IOS VII
	Attendance (48)	-.118	-.202	.116	-.077	-.105	-.188	-.152	-.259	-.076	-.229
	Ranking	-.167	-.268	.087	-.138	-.671	-.406	-.627	-.572	-.359	-.578
	Otis IQ (50)	.213	.389	-.002	.267	.56	.148	.439	.519	.175	.466
	Achievement (47)	.362	.437	-.119	.238	.558	.172	.449	.630	-.048	.488
	ECS I	.139	.448	-.074	.269	.622	.110	.464	.466	.195	.434
	ECS II	-.165	.221	-.151	.070	.374	.015	.250	.280	.077	.250
	ECS III	.309	.247	-.075	.130	.462	.201	.400	.609	.095	.506
	ECS IV	.173	.408	.089	.330	.563	.150	.442	.522	.118	.448
	ECS V	.170	.254	-.017	.166	.482	-.040	.305	.388	-.017	.293
	ECS VI	.180	.183	-.064	.092	.506	.259	.452	.4371	.215	.419
	SCS I	.045	-.270	-.153	-.269	.239	.291	.287	.020	.300	.128
	SCS II	-.200	-.444	-.124	-.374	-.269	-.015	-.186	-.348	.096	-.232
	SCS III	.092	.062	-.114	-.019	.399	.296	.396	.416	.259	.420
	SCS IV	.042	-.107	-.018	-.084	.311	.390	.379	.186	.392	.293
	SCS V	-.185	-.526	-.096	-.415	-.177	.148	-.054	-.303	.150	-.177
	SCS VI	.266	-.149	-.125	-.171	.318	.181	.292	.331	.088	.289
TEACHERS RATINGS	IOS I	--	.378	.159	.347	.081	-.150	-.012	.228	-.181	.107
	IOS II	.378	--	.304	.856	.399	.007	.270	.394	.028	.315
	IOS III	.159	.304	--	.754	-.118	-.216	-.174	-.215	-.222	-.250
	IOS IV	.347	.856	754.	--	.211	-.113	.092	.155	-.102	.081
	IOS V	.081	.399	-.118	.211	--	.615	.938	.801	.521	.816
	IOS VI	-.150	.007	-.216	.113	.615	--	.850	.5443	.774	.714
	IOS VII	-.012	.270	-.174	.092	.938	.850	--	.774	.688	.859
AIDES RATINGS	IOS V	.228	.394	-.215	.155	.801	.544	.774	--	.443	.940
	IOS VI	-.181	.028	-.222	-.102	.521	.774	.688	.443	--	.772
	IOS VII	.107	.315	-.250	.081	.816	.714	.854	.940	.722	--
	TOTAL ECS*	.197	.412	-.064	.250	.686	.207	.550	.651	.185	.573
	TOTAL SCS*	.056	-.229	-.142	-.235	.271	.311	.318	.170	.311	.250

*Total ECS and SCS scores do not include Sub-Test V Oral Vocabulary

Levels of significant correlation for N -			
	46 or 47	.284 at .05 and .368 at .01
	48	.279 at .05 and .361 at .01
	50 or 51	.273 at .05 and .354 at .01

INTERCORRELATION OF THE SIX SUB-TEST SCORES AND TOTAL SCORE* OF THE ENGLISH COMPETENCE SERIES WITH EACH OTHER AND ELEVEN OTHER VARIABLES

Valid N = 38 Subjects in Control Group, Except Where Smaller N is Noted in Parentheses.

VARIABLES	Mean	SD	ECS I	ECS II	ECS III	ECS IV	ECS V	ECS VI	ECS TOTAL*
Attendance (36)	8.56	9.67	-.026	-.461	-.453	-.229	-.314	-.295	-.387
Ranking	2.08	1.11	-.471	-.369	-.588	-.355	-.429	-.563	-.592
Otis IQ (37)	89.86	13.12	.320	.175	.330	.229	.242	.179	-.319
Achievement	1.55	.31	.689	.514	.780	.754	.611	.588	-.866
ECS I	22.37	2.07	--	.437	.505	.596	.605	.548	.728
ECS II	22.89	1.85	.437	--	.611	.432	.634	.547	.706
ECS III	22.13	5.55	.505	.611	--	.556	.682	.627	.881
ECS IV	19.61	4.6	.596	.432	.556	--	.559	.541	.823
ECS V	59.71	3.32	.6045	.6339	.682	.559	--	.849	.811
ECS VI	16.95	2.52	.548	.547	.627	.541	.849	--	.789
IOS I	34.82	3.91	.428	.489	.545	.498	.457	.234	.571
IOS II	1483.	176.	.589	.262	.560	.542	.352	.296	.599
IOS III	-787.	224.	.311	-.192	.439	.297	.187	.150	.332
IOS IV	696.	367.	.471	.008	.535	.443	.282	.233	.489
IOS V	4945.	1602.	.531	.383	.677	.614	.487	.554	.726
IOS VI	-1501.	904.	.469	.214	.377	.303	.152	.260	.409
IOS VII	-3444.	2323.	.549	.347	.614	.541	.395	.484	.660
ECS TOTAL	103.95	13.47	.728	.706	.881	.823	.811	.789	--

*Total English Competence Series score does not include Sub-Test V Oral Vocabulary

Levels of Significant Correlation:

		.05	.01
37 or 37 N	--	.320	.413
38 N	--	.312	.403

INTERCORRELATION OF THE SEVEN SUB-MEASURE SCORES ON INVENTORY OF SOCIALIZATION (IOS) WITH EACH OTHER AND WITH ELEVEN OTHER VARIABLES

Valid N = 38 Subjects in Control Group, Except Where Smaller N is Noted in Parentheses.

VARIABLES	IOS I	IOS II	IOS III	IOS IV	IOS V	IOS VI	IOS VII
Attendance (36)	-.153	-.140	.007	-.065	-.450	-.178	-.380
Ranking	-.106	-.284	-.254	-.290	-.690	.529	-.682
Otis IQ (37)	.3241	.178	.189	.200	.119	.165	.146
Achievement	.4817	.524	.340	.458	.744	.481	.701
ECS I	.428	.589	.311	.471	.531	.469	.549
ECS II	.489	.262	-.192	.008	.383	.214	.347
ECS III	.544	.560	.439	.535	.677	.377	.614
ECS IV	.498	.547	.297	.443	.614	.303	.541
ECS V	.457	.352	.187	.282	.487	.152	.395
ECS VI	.234	.296	.149	.233	.554	.260	.484
IOS I	--	.545	.238	.406	.414	.357	.425
IOS II	.545	--	.686	.896	.567	.421	.555
IOS III	.238	.686	--	.938	.376	.089	.294
IOS IV	.406	.896	.938	--	.500	.255	.444
IOS V	.414	.567	.376	.500	--	.695	.960
IOS VI	.357	.421	.089	.255	.695	--	.868
IOS VII	.425	.555	.294	.444	.960	.868	--
ECS TOTAL*	.571	.599	.312	.489	.726	.409	.660

*Total English Competence Series scores does not include Sub-Test V Oral Vocabulary

Levels of significant correlation:		.05	.01
37 or 36 N	--	.320	.413
38 N	--	.312	.403

APPENDIX D.

An Interpretative Use of the TOBABS in Evaluating a Bilingual Program

The purpose of this Appendix is to report the results of a comprehensive program of testing and data-gathering that was carried out in the school year 1966-1967 in Del Rio, Texas, at the Garfield Elementary School's experimental program in bilingual education. This experimental bilingual program was begun in the fall of 1966 with eight sections of the first grade. Four sections, designated in this report X1, X2, X3 and X4, were experimental sections which received instruction in both English and Spanish. These sections were taught by bilingual teachers, each of whom taught in both languages. Four sections, designated C1, C2, C3 and C4, were control sections and received all instruction in the conventional manner, i.e. only in English. The control and experimental groups were similar in the following general respects. Sections X1 and C1 were equally divided between native English-speaking children and native Spanish-speaking children. The English-speaking children in these two sections knew little or no Spanish at the beginning of the year. The Spanish-speaking children had a functional command of English and could participate adequately in classes conducted only in English. Sections X2 and C2 were composed of all native Spanish-speaking children, approximately half of whom had been retained in the first grade the previous year. Sections X3, X4, C3 and C4 were composed of native Spanish-speaking children who had little or no knowledge of English at the beginning of the school year.

The principal battery of instruments used in this evaluation was the Tests of Bilingualism and Bicultural Socialization. This battery was given as a post-test on May 17-19, 1967. The only pre-test data available for this evaluation were obtained with the Otis Alpha Quick-Scoring Mental Ability Test, which was administered in October of 1966. This I.Q. test was translated and given in colloquial Spanish to the majority of the native Spanish-speaking children in experimental and control sections. In addition, the following test scores or information was obtained for this evaluation: attendance (i.e. the number of absences in a 146 day observational period), 1967-1968 placement (i.e. the following placement decisions could be made with respect to each child: retained, high-first, low-second, second or advancement beyond second grade), the Stanford Achievement Test, Primary Battery I, an independent and overall quartile rank of a child's progress in class with respect to only his own classmates, preschool training (e.g. Head Start, kindergarden, etc.), sex, retentions from the previous year, time in the program, and age.

The Tests of Bilingualism and Bicultural Socialization (TOBABS) is an experimental test which was developed for children in the South Texas area. The validity and reliability of this battery must be kept in mind in interpreting and drawing conclusions from findings presented in this report. This battery is broken down into various parts, sub-tests or sub-measures. The various parts and their designations in this Appensix are as follows:

English Competence Series (ECS)

Sub-Test Number	Title of Sub-Test
I	Recognition of Questions and Commands
II	Comprehension of Commands and Directions
III	Pronunciation: Sound Discrimination
IV	Grammar: Recognition of Grammatically Correct Sentences
V	Oral Vocabulary
VI	Listening Comprehension of Connected Discourse

Spanish Competence Series (SCS)

Sub-Test Number	Title of Sub-Test
I	Recognition of Questions and Commands
II	Comprehension of Commands and Directions
III	Pronunciation: Sound Discrimination
IV	Grammar: Recognition of Grammatically Correct Sentences
V	Oral Vocabulary
VI	Listening Comprehension of Connected Discourse

Inventory of Socialization (*IOS*)

Sub-Test Number	Title of Sub-Test
I	Personal-Social Responsiveness Interview
II	Personal Social Responsiveness Rating, Positive Index
III	Personal-Social Responsiveness Rating, Negative Index
IV	Personal-Social Responsiveness Rating, Overall Index
V	Rating of Adjustment and Behavior, Positive Index
VI	Rating of Adjustment and Behavior, Negative Index
VII	Rating of Adjustment and Behavior, Overall Index'

All subjects were given the complete battery, except the subjects in the control groups who were given the *ECS* and the *IOS* but not the *SCS*. It would have been desirable to have measures of the control subjects' knowledge of Spanish, unfortunately, the *SCS* could not be given because no bilingual teacher-testers were available at that time. The Rating of Adjustment and Behavior was completed by four teacher aides in the experimental sections and by one teacher aide in the control sections, in addition to the eight regular classroom teachers.

The *IOS* utilizes several systems of weights which reflect the relative importance of each item on these instruments as an indicator of negative or positive, i.e. undesirable or desirable, socialization. These weights were arrived at by having Mexican-American and Anglo teachers rate each item on *IOS* for its degree of indicativeness of negative or positive socialization of children.

Only the bicultural weights, i.e. the mean ratings of both Mexican-American and Anglo teachers, are used in this report. The weight for each item has been multiplied by the original rating of the child on that item.

For this evaluation 97 subjects were selected randomly. Fifty-seven subjects were from the experimental sections; forty subjects were from the control sections. Some notion of the similarity of the two groups can be ascertained by examining mean Otis I.Q. scores (obtained as a pre-test score near the beginning of the program), mean quartile ranking, and number of retainees from the previous year.

Comparison of Otis I. Q. Mean Scores, Mean Quartile Ranking, and Number of Retainees

Valid N's=57 for Experimental, 40 for Control,
Except Where They Are Indicated in Parentheses

	Experimental	Control	F-Ration	p
Otis I. Q.	90.32 (50)	89.87 (37)	.024	.8710
Ranking	2.49	2.05	3.340	.0672
Retainees	20	16	--	--

The "Valid N" category after each group refers to the number of valid scores for subjects which were recorded in that group. The "F-Ratio" is a value employed to determine whether the difference between the experimental and control scores is statistically significant or stable. "p" is the level at which the difference between scores is due to chance, e.g. in the preceding comparison the chances are 67 out of a 1000 that the difference in mean ranking, 2.49 for the experimental and 2.05 for the control, is due to chance. In this report, significance will be determined at the .05 level, unless otherwise indicated.

The two groups are clearly similar with respect to Otis I.Q. scores. The experimental group has a higher quartile ranking than the control group, but the difference is not significant. However, the difference does approach significance. Both groups of subjects are in the upper-mid quartile of their class. Both groups are similar with respect to number of retainees. The control group has 40% retainees and the experimental 35%. The experimental group would seem to be slightly favored by being selected from higher quartiles than the control group. It is not clear how to evaluate the slight difference in the two groups with respect to number of retainees. In language competence the retainees can probably be expected to be more advanced. With respect to socialization, it is likely that they would show a less desirable one.

Comparison of Control and Experimental Groups for Attendance, Achievement and Placement

Valid N's = 56 for Experimental, 39 for Control, except
Where They Are Indicated in Parentheses.

	Experimental	Control	F-Ratio	P
Attendance (mean no. of absences)	9.98 (53)	8.18 (38)	.889	.6475
Mean achievement	1.70 (51)	1.56	2.129	.1443
Placement:	--	--	--	--
Retained	4	3	--	--
High First	13	1	--	--
Low Second	3	3	--	--
Second	39	30	--	--
Additional advance	0	1	--	--

There is no significant difference between the two groups with respect to attendance. Mean achievement scores are not significantly different, however, the experimental group has a somewhat higher mean score. It is not entirely clear how to evaluate the results of placement. One is not sure to what extent "High First" amounts to a retention in grade and "Low Second" an advance. However, counting "High First" as a failure and utilizing only the criterion pass-failure, 17 subjects were retained and 39 passed of 56 experimental subjects, and 5 were retained and 34 passed of 39 control subjects -- or 13% failure in control and 30% failure in experimental. However, counting a "High First" as a pass, the experimental group had 7% failure and the control group 8% failure.

Comparison of Means of Control and Experimental Subjects on Sub-Tests of the ECS

N = 57 Experimental 40 Control

Sub-Test Number	Experimental	Control	F-Ratio	P
I	20.46	22.38	10.182	.0023
II	21.40	22.85	6.125	.0144
III	23.35	22.35	.939	.6635
IV	19.06	19.68	.465	.5040
V	57.81	59.80	4.655	.0314
VI	16.51	17.05	.779	.6164

The mean scores on the English Competence Series are higher for the control group in all cases except III Pronunciation: Sound Discrimination. The difference is significant for I Recognition of Questions and Commands, II Comprehension of Commands and Directions, and V Oral Vocabulary. It would appear from these comparisons that the subjects in the control sections were significantly better in learning English than those in the experimental sections who were taught in both English and Spanish.

Comparison of Means of Control and Experimental Groups on the Inventory of Socialization

N = 57 Experimental and 40 Control

Sub-Measure	Experimental	Control	F-Ratio	P
I	36.	35.	2.155	.1415
II	1527.	1488.	.969	.6716
III	-706.	-785.	3.874	.0490
IV	821.	703.	3.007	.0823
V	4805.	5060.	.743	.6050
VI	-1794.	-1464.	3.200	.0732
VII	3011.	3606.	1.733	.1881

There is only one significant difference in these comparisons, III Personal-Social Responsiveness -- Negative Index, and it shows the experimental group in a favorable light, i.e. its index of negative socialization is significantly lower, suggesting a better socialization or adjustment. The experimental group was rated slightly higher on IV Personal-Social Responsiveness -- Overall Index and the difference approaches significance. However, the control group was rated higher on VI Rating of Adjustment and Behavior -- Negative Index and the difference also approaches.significance.

In summary, the subjects in the control sections were significantly better with respect to language competence in English or mastery of the basic structure of English. They scored significantly higher on three sub-tests of the ECS. The experimental group scored slightly but not significantly higher on one sub-test. With respect to socialization or adjustment, the experimental group appeared to have a slight advantage. They scored significantly better on one sub-measure and somewhat better on another. The control group was rated somewhat better on one sub-measure of socialization. The experimental group obtained somewhat higher achievement scores. There were no significant difference in attendance for the two groups. The examination of placement was inconclusive. In general, there were no outsanding or dramatic differences in the control and experimental groups.

The effects of Garfield's experimental program can perhaps be brought into sharper and clearer focus by more selective comparisons of experimental and control subjects. The previous comparisons of the two groups included subjects who had not been in the program the full year. A more revealing comparison can be made if those subjects who have not been in the program the full year are excluded. The composition of the two groups with respect to Otis I. Q. mean and mean quartile ranking, once those subjects who have not been in the program a full year are excluded, is as follows:

	Experimental	Control	F-Ratio	P
Otis I. Q.	90.61 (49)	91.15 (34)	.029	.8585
Ranking	2.47	2.12	1.738	.1880

In this comparison the control group now has a slightly higher mean Otis I. Q. score; however, the difference between the two groups is not significant. The difference in mean quartile ranking is more leveled out than in the previous comparison.

Comparison of Means of Control and Experimental Groups Less Subjects without a Full Year in Program

Valid N's = 49 for Experimental and 34 for Control,
except Where They are Indicated in Parentheses.

	Experimental	Control	F-Ratio	P
Attendance	10.23 (47)	9. (33)	.341	.5677
Achievement	1.70	1.53	2.685	.1014

English Competence Series

Sub-Test Number	Experimental	Control	F-Ratio	p
I	20.96	22.21	5.019	.0261
II	22.	22.81	2.906	.0882
III	23.06	21.82	1.1191	.2780
IV	18.92	18.92	.000	.9905
V	58.35	59.53	1.846	.1747
VI	16.43	16.76	.246	.6274

Inventory of Socialization

Sub-Test Number	Experimental	Control	F-Ratio	p
I	35.78	34.62	2.404	.1210
II	1523.	1468.	1.583	.2094
III	-702.	-797.	4.651	.0319
IV	821.	671.	3.957	.0472
V	4767.	4738.	.009	.9236
VI	-1846.	-1580.	1.798	.1805
VII	2922.	3158.	.257	.6199

Mean differences in attendance and achievement remain insignificant. The mean achievement score of the experimental group is somewhat greater. On the ECS, there is only one sub-test in which a significant difference between the groups is recorded. This is Sub-Test I on which the control group appear significantly better. On II the difference in mean score approaches a significant level and is in favor of the control group. In general, this comparison shows the two groups to be performing more alike with respect to language competence in English. There are significant differences between the two groups on two sub-measures of the IOS, both differences in favor of the experimental group. Altogether the experimental group appears in a somewhat more favorable light on five of these measures, the control group on two.

Comparison of Means of Experimental and Control Groups -- Less Subjects Without a Full Year in Program and Less All Subjects Retained In Grade Previous Year

Valid N = 37 for Experimental, 24 for Control, Except Where Indicated In Parentheses.

	Experimental	Control	F-Ratio	P
I.Q.	95.19 (32)	92.13 (23)	.657	.5732
Ranking	2.38	2.42	.015	.8977
Attendance	9.89 (35)	10.59 (22)	.100	.7509
Achievement	1.83 (31)	1.51	5.176	.0254
English Competence Series				
I	21.49	22.38	1.545	.2164
II	22.27	23.13	2.025	.1565
III	23.32	21.71	1.232	.2709
IV	19.72	18.96	.454	.5102
V	58.19	58.71	1.735	.1899
VI	16.22	16.67	.286	.6013
Inventory of Socialization				
I	36.01	35.61	.238	.6328
II	1578.	1475.	3.971	.0481
III	-720.	-825.	3.158	.0771
IV	858.	650.	4.393	.0380
V	5073.	4494.	2.439	.1198
VI	-1762.	-1491.	1.155	.2868
VII	3311.	3003.	.286	.6012

Considering only those subjects who have been in the program the full year and had not been retained in grade the previous year, all significant differences between the two groups are in favor of the experimental group. Achievement is significantly higher and a better socialization is reflected on sub-measures II and III of the IOS. Sub-measure III of the IOS records a difference approaching significance, which is in favor of the experimental group. There are no differences, significant or near significant, between the two groups on the ECS.

Comparison of Means of Control and Experimental Groups -- Only Subjects Retained in Grade the Previous Year

Valid N's = 20 for Experimental, 16 for Control,
Except Where They Are Indicated in Parentheses.

	Experimental	Control	F-Ratio	P
I.Q.	81.67 (18)	86.14	1.631	.2090
Ranking	2.7	1.5	11.393	.0022
Attendance	10.17 (18)	4.88	2.393	.1281
Achievement	1.49	1.64	3.820	.0562
English Competence Series				
I	18.5	22.38	17.225	.0004
II	19.8	22.44	5.695	.0215
III	23.4	23.3	.004	.9465
IV	17.8	20.75	4.020	.0502
V	57.1	59.9	3.259	.0765
VI	17.05	17.63	.470	.5045
Inventory of Socialization				
I	35.95	34.06	2.505	.1191
II	1433.	1506.	1.606	.2114
III	-681.	-725.	1.297	.2619
IV	752.	781.	1.640	.6903
V	4311.	5933.	12.352	.0016
VI	-1854.	-1422.	2.601	.1123
VII	2457.	4511.	9.154	.0049

The two groups of subjects included in this comparison differed significantly with respect to quartile class rank. The experimental group was in the upper-mid quartile, and the control group in the lower-mid quartile. Nevertheless, the control group obtained a somewhat higher mean achievement score. There were significant differences between the groups on Sub-Tests I, II, and IV of the ECS, all in favor of the control group. There were two significant differences between the groups on Sub-Tests V and VII of the IOS, here again in favor of the control group. All of these findings point to the conclusion that the retainees in the control group did much better in many respects than the experimental group. One might speculate that the retainees in the experimental group had acquired certain expectations during their previous year of monolingual schooling which interfered with their learning English and their adjustment when they were placed in the novel context of bilingual schooling.

Comparison of Means of the Four Experimental Sections

Valid N's = 12 for X1, 14 for X2, 13 for X3 and 12 for X4, Except Where They Are Indicated In Parentheses.

	XI	X2	X3	X4	F-Ratio	P
Attendance	7.09	11.43	13.33 (12)	7.64 (11).	1.516	.2226
Ranking	1.91	2.79	2.38	2.75	1.481	.2309
Otis I. Q.	103.91(11)	83.43	91.46	84.67	7.980	.0004
Achievement	2.34	1.55	1.44	1.35 (8)	18.056	.0000

English Competence Series (ECS)

I	23.6	19.	21.6	18.8	11.49	.0000
II	23.7	20.3	22.1	20.9	3.264	.0289
III	27.2	23.4	20.0	22.8	7.171	.0007
IV	22.9	18.6	18.9	15.5	9.023	.0002
V	61.2	58.	57.5	56.8	2.967	.0406
VI	18.2	17.2	15.6	14.9	2.810	.0486

Spanish Competence Series (SCS)

	X1	X2	X3	X4	F-Ratio	p
I	19.8	21.8	21.5	19.4	1.576	.2064
II	18.5	23.6	22.5	20.9	5.361	.0033
III	27.1	27.6	23.6	22.3	4.898	.6051
IV	19.1	21.2	20.0	19.0	1.312	.2810
V	55.	62.	61.1	60.3	6.147	.0016
VI	17.3	17.7	13.9	15.5	5.559	.0027

Inventory of Socialization (IOS)

I	37.4	35.8	34.5	36.1	2.699	.0554
II	1704.	1367.	1586.	1460.	9.333	.0001
III	-773.	-662.	-658.	-712.	1.394	.2555
IV	931.	705.	928.	748.	2.164	.1035
V	5867.	4040.	4943.	4435.	6.161	.0016
VI	-1792.	-2113.	-1764.	-1598.	.849	.5232
VII	4074.	1927.	3178.	2837.	3.073	.0359

Section X1 had a significantly better achievement score and somewhat better attendance. Section X4 had the lowest achievement score and Section X3 had the worst attendance. The sections, however, were significantly different with respect to I. Q. Section X1 had significantly higher mean scores on all the sub-tests of the ECS. Section X4 had the lowest mean scores on four of these sub-tests, Section X2 on one and Section X3 on another. Section X2 had the highest mean scores on all sub-tests of the SCS and the differences were significant in four cases. Section X4 had the lowest mean scores on four sub-tests. X1 had the lowest mean scores on two sub-tests. Section X1 had higher or better mean ratings on the IOS in five cases. Sections X3 and X4 each had the higher or better mean on one sub-measure, but the differences were not significant. Section X2 had the lowest or worst mean scores on five sub-measures and the differences were significant in three. X1 had the lowest or worst mean score on one sub-measure, but the difference was not significant. Section X3 had the lowest or worst mean score on one sub-measure, but the difference was not significant, only approaching significance. The teacher-aides' ratings on the Rating of Adjustment and Behavior showed Section X1 to be superior with respect to adjustment on two out of three sub-measures and in both instances the differences were significant. Section X3 appeared significantly better on one sub-measure. Section X2 appeared significantly worse than all other sections on all three sub-measures.

In summary, Section X1 appeared to be superior with respect to English and socialization. Section X2 appeared superior in Spanish and poorest in socialization. Section X4 appeared poorest in both English and Spanish.

Comparison of Means of Four Control Sections

Valid N's = 10 for C1, 8 for C2, 10 for C3 and 10 for C4
Except Where They Are Indicated In Parentheses

	C1	C2	C3	C4	F-Ratio	P
Attendance	7.3	3.86	12.6	9.1	1.185	.3309
Ranking	2.3	1.63 (8)	2.2	2.1	.583	.6340
Otis I. Q.	97.1	80.86 (7)	90.1	88. (7)	2.313	.0930
Achievement	1.73	1.79	1.39	1.36	7.024	.0011
			English Competence Series			
I	23.1	23.63 (8)	22.2(10)	20.8 (10)	4.049	.0144
II	24.3	23.13	22.9	21.3	6.155	.0022
III	26.6	24.25	19.2	18.9	6.502	.0017
IV	22.3	24.75	16.4	16.	20.49	.0000
V	62.1	60.63	58.3	58.	4.171	.0128
VI	18.2	17.88	15.9	16.	2.417	.0823
			Inventory of Socialization			
I	37.7	36.25	35.2	30.4	11.750	.0001
II	1552.	1629.	1419.	1361.	6.036	.0024
III	-736.	-696.	-734.	-734.	3.273	.0322
IV	815.	933.	457.	626.	3.502	.0253
V	4875.	6952.	4253.	4113.	9.361	.0003
VI	-1778.	-783.	-992.	-2309.	9.332	.0003
VII	3096.	6169.	3251.	1805.	8.502.	.0004

Section C1 had a significantly higher I. Q. mean than the other three control sections. Section C1 also had a somewhat higher quartile ranking. Section C2 had the lowest I. Q. and quartile ranking. Section C2 had the best attendance and the highest achievement, however, only achievement was significantly higher. C3 had the poorest attendance and C4 had the lowest achievement mean.

Section C1 had significantly higher scores on three sub-tests of the ECS and one somewhat higher score on another. Section C2 had significantly higher scores on two sub-tests. Section C3 had a somewhat lower score on one sub-test. Section C4 had significantly lower scores on five sub-tests of the ECS.

Section C2 showed a significantly superior socialization or adjustment on all sub-measures of the IOS, except one. Section C1 appeared significantly superior on one. Section C3 appeared significantly inferior with respect to socialization on one. Section C4 appeared significantly inferior on six sub-measures.

In summary, Section C2 appeared to be the best section on most variables. Section C1 was somewhat superior with respect to English competence. Section C4 was the weakest section in nearly all respects.

Comparison of Means of Male and Female Subjects in Control Group

Valid N's = 14 for M, 24 for F, Except Where They Are Indicated In Parentheses.

	Male	Female	F-Ratio	P
Attendance	8.86	8.36 (22)	.621	.3803
Ranking	2.5	1.83	3.303	.0741
Otis I. Q.	89.5	90.09 (23)	.016	.8939
Achievement	1.46	1.61	2.002	.1623
		English Competence Series		
I	22.21	22.46	.117	.7340
II	23.43	22.58	1.845	.1798
III	21.07	22.75	.784	.6146
IV	19.79	19.5	.032	.8512
V	60.29	59.38	.640	.5654
VI	17.0	16.9	.009	.9214
		Inventory of Socialization		
I	35.29	34.54	.306	.5403
II	1409.	1526.	4.179	.0457
III	-910.	-715.	7.670	.0087
IV	499.	811.	7.260	.0087
V	4139.	5416.	6.247	.0163
VI	-1871.	-1286.	3.881	.0536
VII	2268.	4130.	6.326	.0157

The male subjects had a somewhat higher quartile rank than the female subjects. There were no significant differences between the two with respect to English competence. However, the female subjects were significantly superior to male subjects on all but one sub-measure of socialization. This suggests that male subjects -- most of whom were Mexican-Americans -- had a greater resistence to socialization in school and a greater problem of adjustment.

Comparison of Means of Male and Female Subjects
In Experimental Group

Valid N's = 29 for M, 22 for F
Except Where They Are Indicated In Parentheses

	Male	Female	F-Ratio	P
Attendance	12.67	6.67 (21)	6.625	.0128
Ranking	2.31	2.68	1.226	.2730
Otis I. Q.	91.03	89.33 (21)	.188	.6705
Achievement	1.65 (26)	1.74 (21)	.317	.5831
English Competence Series				
I	20.52	20.91	.203	.6585
II	21.76	21.59	.036	.8454
III	22.45	24.27	2.058	.1542
IV	18.86	19.14	.051	.8175
V	58.21	58.5	.062	.8003
VI	16.24	16.82	.387	.5436
Spanish Competence Scale				
I	20.57	20.91	.154	.6889
II	21.69	21.27	.143	.7083
III	25.07	25.41	.064	.7966
IV	19.69	20.37	.383	.5459
V	60.34	58.9	.916	.6548
VI	15.67	16.64	1.201	.2780
Inventory of Socialization				
I	35.17	36.91	5.503	.0218
II	1496.	1561.	1.272	.2640
III	-707.	-707.	.091	.7615
IV	863.	855.	.368	.5539
V	4828.	4746.	.049	.8202
VI	-1772.	-1900.	.283	.6036
VII	3056.	2846.	.145	.7063

Aide Rating On Inventory Of Socialization

	Male	Female	F-Ratio	P
V	4900.	5401.	1.190	.2804
VI	-1484.	-1646.	.503	.5114
VII	3416.	3756.	.319	.5813

There appeared to be very few differences between male and female subjects in the experimental group. The female subjects were significantly better only on attendance. The males were significantly superior on Sub-Measure I of the IOS.

Comparison of Means of Head Start and Non-Head Start Subjects in Experimental Group

Valid N's = 33 for HS and 18 for NHS, Except Where They Are Indicated In Parentheses

	HS	NHS	F-Ratio	P
Attendance	9.97 (32)	10.19 (16)	.007	.9316
Ranking	2.61	2.22	1.219	.2745
Otis I. Q.	89.67	91.59 (17)	.221	.6455
Achievement	1.60 (29)	1.83	2.216	.1399
	English Competence Series			
I	20.88	20.33	.368	.5539
II	22.21	20.7	2.759	.0993
III	22.48	24.6	2.631	.1074
IV	18.88	19.2	.052	.8154
V	58.61	57.83	.402	.5362
VI	16.09	17.22	1.416	.2381
	Spanish Competence Scale			
I	21.14	19.78	1.900	.1710
II	22.36	19.9	4.922	.6293
III	24.61	26.3	1.589	.2111
IV	19.48	20.89	1.585	.2116
V	60.64	58.1	2.927	.0897
VI	15.88	16.5	.475	.5011
	Inventory of Socialization			
I	35.45	36.78	2.83	.0952
II	1495.	1577.	1.841	.1779
III	-711.	-675.	.552	.5324
IV	734.	901.	1.809	.1817
V	4559.	5221.	3.185	.0769
VI	-2080.	-1364.	9.765	.0033
VII	2479.	3857.	6.574	.0129

Aide Rating On Inventory Of Socialization

	HS	NHS	F-Ratio	P
V	4614.	6038.	10.57	.0024
VI	-1692.	-1300.	2.876	.0925
VII	2922.	4738.	10.167	.0028

The results of this comparison are surprising. The subjects who had been in Head Start had a somewhat lower I. Q. and achievement mean score. They had slightly better attendance than the non-Head Start subjects and were rated higher in class. The Head Start subjects obtained a somewhat higher mean score on one sub-test of the ECS and they obtained slightly higher mean scores on two others. The Head Start subjects appeared significantly superior on one sub-test of the SCS and somewhat superior on two others. The non-Head Start subjects appear slightly superior on three sub-tests of the SCS. The non-Head Start subjects appeared significantly superior with respect to socialization and adjustment on four out of ten sub-measures of the IOS. They appeared somewhat superior on three others.

Comparison of Means of Head Start
and Non-Head Start Subjects in Control Group

Valid N's = 21 for HS, and 17 for NHS, Except
Where They Are Indicated In Parentheses.

	HS	NHS	F-Ratio	P
Attendance	10.6 (20)	6.0 (16)	2.012	.1614
Ranking	2.48	1.59	6.776	.0128
Otis I. Q.	90.43	89.13 (16)	.085	.7693
Achievement	145.95	167.18	4.652	.0356

English Competence Series

	HS	NHS	F-Ratio	P
I	22.29 (21)	22.47 (17)	.071	.7872
II	23.24	22.47	1.606	.2103
III	21.35	23.05	.834	.6297
IV	18.14	21.41	5.143	.0277
V	59.71	59.71	.000	.9900
VI	16.76	17.18	.242	.6312

Inventory of Socialization

	HS	NHS	F-Ratio	P
I	35.33	34.18	.795	.6180
II	1452.	1520.	1.387	.2453
III	-853.	-704.	4.426	.0401
IV	599.	816.	3.401	.0701
V	4311.	5728.	8.638	.0058
VI	-1570.	-1417.	.257	.6210
VII	2742.	4319.	4.587	.0368

In the control groups, the Head Start subjects had the higher I. Q. and quartile ranking. However, the non-Head Start subjects had somewhat better attendance and significantly better achievement.

The non-Head Start subjects obtained significantly higher scores on one sub-test of the ECS and showed somewhat higher mean scores on four others. The non-Head Start subjects also were rated higher with respect to socialization and adjustment. They achieved significantly higher scores on three out of seven sub-measures and somewhat higher on another. The Head Start subjects had inferior scores on all sub-measures of the IOS except one.

Comparison of Means of Subjects Under and Over 7½ Years Old in Experimental Group

Valid N's = 27 under, 24 over, except where
they are indicated in parentheses.

	Under	Over	F-Ratio	P
Attendance	9.73 (26)	10.41 (22)	.075	.7820
Ranking	2.41	2.54	.159	.6940
Otis I. Q.	94.96	84.87 (23)	7.805	.0074
Achievement	1.69 (24)	1.68 (23)	.003	.9525
		English Competence Series		
I	21.56	19.71	5.039	.0276
II	22.48	20.79	3.962	.0693
III	22.67	23.88	.896	.4693
IV	19.30	18.63	.310	.5890
V	58.33	58.33	0.	1.0000
VI	15.93	17.13	1.747	.1895
		Spanish Competence Series		
I	20.0	21.46	2.252	.1361
II	20.56	22.58	3.686	.0576
III	24.11	26.46	3.309	.0715
IV	19.22	20.83	2.309	.1313
V	58.78	60.83	2.081	.1519
VI	15.41	16.88	3.040	.0839
		Inventory of Socialization		
I	35.52	36.38	1.253	.2676
II	1562.	1481.	2.014	.1588
III	-725.	-669.	1.495	.2252
IV	837.	811.	.093	.7593
V	5095.	4453.	3.282	.0727
VI	-1738.	-1928.	.636	.5652
VII	3357.	2525.	2.426	.1219

Aide Rating on IOS

	Under	Over	F-Ratio	P
V	5427.	4767.	2.126	.2078
VI	-1420.	-1704.	1.611	.2078
VII	4007.	3063.	2.617	.1083

In this comparison subjects over and under seven and a half years old appeared equal with respect to attendance, class ranking and achievement. However, the younger subjects had a significantly higher I. Q. The younger subjects scored significantly higher on two sub-tests of the ECS and somewhat higher on another. The older subjects scored somewhat higher on two sub-tests, III Pronunciation and VI Listening Comprehension of Connected Discourse. The older subjects scored higher on all six sub-tests of the SCS. In two instances their scores were significantly higher. The younger subjects appeared somewhat superior on eight out of ten sub-measures of socialization and adjustment. However, the differences in ratings appeared to approach significance in only one instance.

Generally, the younger subjects in the experimental group appear to do better than the older subjects, except in Spanish.

Comparison of Means of Subjects Under and Over 7$\frac{1}{2}$ Years Old in Control Group

Valid N's = 17 under and 21 over, except where they are indicated in parentheses

	Under	Over	F-Ratio	P
Attendance	11.73	6.29	2.841	.6974
Ranking	2.53	1.71	5.546	.0227
Otis I. Q.	93.94 (16)	86.76	2.775	.1010
Achievement	1.49	7.60	1.125	.2962
English Competence Series				
I	22.18	22.52	.252	.6242
II	23.	22.81	.695	.7576
III	21.82	22.38	.090	.7631
IV	18.71	20.33	1.151	.2905
V	59.65	59.76	.011	.9151
VI	16.47	17.33	1.072	.3082
Inventory of Socialization				
I	36.35	33.57	5.141	.0278
II	1482.	1484.	.001	.9730
III	-822.	-758.	.724	.5649
IV	660.	725.	.282	.6068
V	4393.	5393.	3.841	.0548
VI	-1584.	-1434.	.246	.6288
VII	2869.	3959.	2.322	.1326

In the control group the younger subjects had a higher I.Q. and class ranking mean. Their ranking was significantly different and their I. Q. mean was somewhat higher. The older subjects had somewhat better attendance and achievement. The older subjects scored somewhat or slightly higher on five of the six sub-tests of the ECS, the younger subject on one. In no instance was the difference in scores significant or even approaching significance. The older subjects were rated significantly higher on one sub-measure of socialization and somewhat higher on four others. The younger subjects were superior on one sub-measure. Thus, it would seem that the younger subjects are somewhat more handicapped and do less well in a mono-lingual program than do older subjects.

In conclusion, it would seem that the Garfield experimental program can be judged a qualified success. The degree of success is more significant if one considers that it was a new program, in operation only for its first year. The comparisons of all subjects in experimental and control groups showed the control subjects to have a superiority in English competence but the experimental group showed the superior socialization and adjustment. When a comparison was made of the two groups including only subjects who had been in the program the full school year and had not been retained in grade, the results showed no significant differences with respect to English competence and an even more superior socialization for the experimental bilingual sections. This means that the experimental subjects, even though receiving instruction in both English and Spanish, were as equally competent in English as those learning only in English. This would seem to be a justification for a bilingual program.

Results of the intergroup comparisons of the experimental sections seem to indicate that superior results were achieved when English-speaking and Spanish-speaking children were mixed and not segregated in class. Results of the intergroup comparisons of control groups seem to indicate that the male pupils have a harder task of adjusting to a program of monolingual schooling than female pupils. Pupils who had previously been in Head Start showed some superiority in language but a less desirable socialization and adjustment in both control and experimental groups. Results of comparisons across age differences showed that the younger children in the sample do better in bilingual classes and older children in the sample do better in monolingual English classes.

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